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JOINT DOCUMENTS.

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OF THE

32125

STATE OF MICHIGAN,

FOR THE YEAR 1888.



IN FIVE VOLUMES.

VOL. III.



BY AUTHORITY.

LANSING:
DARIUS D. THORP, STATE PRINTER AND BINDER.
1889.

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FIFTY-SECOND ANNUAL REPORT
OF THE
SUPERINTENDENT OF PUBLIC INSTRUCTION
OF
THE STATE OF MICHIGAN,
WITH
ACCOMPANYING DOCUMENTS
FOR
THE YEAR 1888.

BY AUTHORITY.

LANSING:
DARIUS D. THORP, STATE PRINTER AND BINDER.
1889.

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STATE OF MICHIGAN,
DEPARTMENT OF PUBLIC INSTRUCTION, }
Lansing December 31, 1888.

To His Excellency, CYRUS G. LUCE,
Governor of the State of Michigan:

SIR,—In compliance with the provisions of law, I have the honor herewith to transmit through you to the Legislature, the annual report of the Superintendent of Public Instruction, together with the accompanying documents, for the year 1888.

Very respectfully,

Your obedient servant,

JOSEPH ESTABROOK,
Superintendent of Public Instruction.

SUPERINTENDENT'S REPORT.

A half a century has elapsed since our public school system came into existence. It was born in the very infancy of the State, and has kept pace with its growth and development. The district log schoolhouse was planted among the log cabins of the pioneer settlers. With the growth of the people in wealth and numbers, the first rude huts have largely given place to costly and convenient houses, and the little groups of children have grown into the multiplied grades of our splendid union schools. Legislative enactments have been secured from time to time, to remedy the defects which the light of experience has made known; but the organic features of the system remain essentially the same as were provided by the generous hearted, broad minded and far seeing men of fifty years ago. Let it be ours to honor their memory and wisdom, not by halting where they began, not by clinging with foolish conservatism to errors which they themselves with a half century's observation and experience, would now seek to remedy, or by striving to hold our system in the cradle in which its infancy was rocked, but let us strive to do them honor by promoting to a grander growth the institutions which they founded, by correcting defects which have become manifest in the growth of the system, by unfolding new agencies and bringing into exercise new elements of power and giving a still broader and more generous application of the great doctrines of public and general education which they so ably advocated.

The theory of our free public school system is that all children in the State shall be afforded equal facilities for obtaining a common school education. Any portion of the system that tends to deprive one child of school privileges afforded other children in his immediate neighborhood is a radical defect in the system, and the welfare of the State as well as the principle of equal justice to all makes it imperative upon the State to remedy the defect as far as possible. It is, of course, impracticable to devise a system of public schools that will afford facilities for secondary or higher education to the children of the sparsely settled rural districts, that will be equal to the opportunities offered to children in our cities and larger villages. The advantages that follow the concentration of population and wealth to a small area of ter-

ritory are as marked in educational matters as in other features of municipal life. They are among the benefits that follow "centralization" and no amount of legislation can alter them. But in this discussion I confine myself to the more than 300,000 children in the ungraded country schools where the natural obstacles to an equalization of educational privileges are comparatively few and unimportant. Are these children, mostly sons and daughters of farmers, and comprising more than one-half of the school population of the State, receiving just and equitable consideration under our present school system? A careful and unprejudiced investigation will, I am sure, convince the most conservative that very grave inequalities exist in this regard. There is scarcely a county in the State but what affords ample proof of this fact. This condition of affairs being conceded, is it not the duty of every citizen to aid in the adoption of any means that gives promise of reducing this inequality to a minimum without adding to the burdens of the taxpayer? My faith in the loyalty of the people of Michigan to the principle of free schools assures me that they will heartily approve of any measure that they are convinced will most nearly approximate absolute equality and justice in the matter of popular education. With this assurance I am again impelled to urge upon the legislature an amendment to the school law providing for

TOWNSHIP SCHOOL DISTRICTS,

and to reiterate some of the arguments that have secured for this system the support of leading educators throughout the country.

The idea of consolidating all the schools of a township under the management of one board is not a novel, untried experiment even in Michigan. A number of townships throughout the State have secured the adoption of this plan by special legislation, and at every session of the legislature, bills are introduced providing for this plan of school organization in certain townships. In Alpena county, the schools in five of the seven townships that report to this department are managed under the township plan. A comparison of the comparative workings of the township and district systems as shown by the reports from this county, is given later in this discussion.

As long ago as 1861 an effort was made to make the township system general. The measure was earnestly advocated by Hon. John M. Gregory, then Superintendent of Public Instruction, who in his report for the following year says: "In 1861, a bill was introduced into the legislature of this State, authorizing the establishment of the township system in such townships as might desire it. The bill met with considerable favor, but, for want of time to perfect it, it was left among the unfinished business of the session. The plan

proposed was simply that a township school board should be elected, consisting of six trustees, who should have the exclusive care and control of all the schools in the township, just as our city school boards have the control of all the city public schools."

The effort was renewed during the session of 1885, but the bill met the same fate as the one of 1861 and was buried in the unfinished business. The measure was again introduced at the last session but was not considered until the closing days of the session and the bill was lost in the Senate by a vote of 13 to 14. These previous efforts, although failing of adoption, have been the means of calling the attention of the people to this question, and especially during the past two years the subject has been very generally discussed at teachers' and farmers' meetings, and the merits of the proposed change were probably never so generally understood as at present.

The fact that such eminent educators as Horace Mann and Ex-Gov. Boutwell of Massachusetts; the heads of the State educational departments of Massachusetts, Connecticut, Rhode Island, Wisconsin, Vermont, New Hampshire, Iowa, Indiana, West Virginia, Tennessee, Alabama, Maine, Pennsylvania, and Ohio, where the township system is in operation either wholly or partially, have endorsed the system without qualification, and State Superintendents Gregory, Hosford, Briggs, Gower, Gass and Nelson of our own State have recommended its adoption, would certainly imply that the measure was entitled to careful consideration.

Among the defects charged to our present system and which experience has shown can be largely remedied under the township plan, are:

1. *Unequal facilities for schooling afforded children in the same township.*

A few instances taken at random from the reports of township boards of school inspectors on file in this office will serve to establish the fact that this inequality exists. In the township of Alcona, Alcona county, there are four school districts with a school population of 14, 20, 19, and 23 respectively. The first of these districts maintained no school during the past school year; the second had three months' school; the third 9 months and the last 10 months. Is there any equity in a system that affords 10 months' schooling to 23 children in one portion of a township, and deprives 14 in another portion of the same township of any schooling?

In the township of Reno, Iosco county, there are three districts. In one district no school was maintained; in another school was held for 6 months, and in the third 10 months' school was maintained. In Lee township, Allegan county, one district had a three months' school, while an adjoining district in the same township had ten months' school. In Ionia township,

Ionia county, one district held three months' school while an adjoining district had ten.

Similar instances could be cited from nearly every county in the State, but the above are sufficient to prove the existence of great inequality in the school privileges afforded children in the same township.

2. Inequality in the cost of maintaining school in different parts of the same township..

The per capita cost of the schools in district No. 2 of Portland township, Ionia county, for the last school year, based upon the number of children attending school was \$27.55, while in district No. 4 fractional in the same township, the per capita cost on the same basis was but \$7.17. In district No. 1, Nottawa township, Isabella county, the per capita cost was \$20.40, while in district No. 2 it was but \$5.09. In district No. 1, Alameda township, Ingham county, the per capita cost was \$10.83; in district No. 5, same township, \$4.04. In district No. 2, Bethel township, Branch county, the per capita cost was \$10.89; in district No. 5, fractional, it was \$4.51. These cases are by no means exceptional.

3. Too great diversity of text-books.

The existence of this evil is too thoroughly understood to require the citing of special instances.

4. Too many school officers.

Our present system requires the services of about 20,000 school officers in the ungraded districts, or an average of three officers for every teacher necessary to supply the schools in these districts. It naturally follows that among this large number of local school officials there are many who are incompetent, or who take no interest in school affairs, or who accept the office for the purpose of securing a position for some friend or relative as teacher. With such persons the welfare of the children has but little consideration and the schools suffer from the neglect or inefficiency of the director or teacher. While perhaps in a majority of districts the school offices are filled by capable and conscientious men, the evil of inefficient management in our rural district schools is much too prevalent, as an inspection of the letter files in this office would show.

5. Unjust discrimination in local taxation.

In district No. 4 fractional, Battle Creek township, Calhoun county, the amount raised by district tax was 32 per cent. of the total cost of the schools, and at the rate of \$2.50 per capita on the number of children enrolled in the district, while in district No. 7 fractional of the same township, the district tax amounted to 72 per cent. of the total cost, or \$9.60 per capita on the enrollment.

In district No. 3, Bedford township, Calhoun county, the district tax was 27 per cent. of the total cost, and \$2.78 per capita. In district No. 4, same township, 77 per cent. of the total cost was raised by local taxation or a per capita rate, based on the enrollment, of \$13.75.

In district No. 5, Irving, Barry county, the district tax amounted to 77 per cent. of the total cost, and in district No. 2 fractional, same township, 32 per cent. of the total cost was raised by district tax. The amount of district tax per capita of the enrollment in these districts was \$12.31 and \$3.94 respectively.

In district No. 4 of Gilead, Branch county, with an enrollment of 88 children, \$100 was raised by district tax during the last school year, or at the rate of \$1.13 per capita of the enrollment. The district tax amounted to about 30 per cent. of the entire cost of the schools. In district No. 6 fractional in the same township, with an enrollment of 14 children, there was raised by local taxation \$165, or at the rate of \$11.79 per capita of the enrollment. In this district the local tax amounted to 80 per cent. of the total cost of the schools.

The above include but a few of the objectionable features in the management and workings of our district schools that are largely attributable to our present district system, and which experience has demonstrated can, to a great extent, be remedied by changing to the township plan. Many other difficulties are constantly arising, such as frequent changes of teachers in the same school; lack of proper classification and grading; quarrels over the selection of schoolhouse sites and the establishment of district boundaries; children forced to attend school in their own district when they could be more conveniently accommodated in an adjoining district. All these conditions prevent the schools from accomplishing their best results by depriving the children of realizing the largest benefits possible with the money expended, besides creating among the patrons of the schools a feeling of indifference if not of positive opposition.

I have endeavored to establish the fact that radical defects and inequalities exist in our present system of district school organization. Admitting the existence of these evils, the all important question arises, what can be done to alleviate or cure them? It is not claimed that any change can be made that will entirely remove the imperfections noted. But it is believed that they can be materially reduced and that our country schools can be made to accomplish much better results with an equal or less expenditure of money by adopting the Township District System, and to substantiate this claim the following facts are submitted, gathered from reports on file in this office and from the

testimony of leading educators and others in states where the system has been tried.

The reports from Alpena county furnish some significant facts bearing upon the equalization of school privileges and of the cost of maintaining schools under the township plan. In this county five townships have their schools organized on the township plan by special legislation. Two retain the district system. The average per capita expense of the schools in the township districts for the last school year, as shown by the reports of township boards of school inspectors, was \$13.71, and in those retaining the district system it was \$14.80. The average length of school in the township districts was nine months and in the others only four and one-half months. In other words it cost \$14.80 to give each child *four and one-half months' schooling* in the towns retaining the district system, while in those operated under the township plan, the cost per pupil for *nine months' schooling* was \$13.71.

In the townships retaining the district system one district with a school census of 18 maintained no school at all; three districts with a combined school census of 43 maintained three months' school; three districts with a total school census of 71 maintained four months' school; two districts with a total school census of 58 maintained five months' school, and six districts with a combined school population of 210 had six months' school. In not one of these districts was school maintained for a period equal to the average duration of school in all the rural districts of the State. Of the five townships organized under the township plan, two, with a total school census of 402, maintained eight months' school; one with a school census of 221 maintained nine months' school, and two having a total school population of 484 had ten months' school. These facts simply confirm the statements of State Superintendents Patterson, Luce, and Stockwell of New Hampshire, Maine, and Rhode Island, respectively, that under the township system the average length of school has been increased and the average cost diminished, while the school privileges are the same for all the children in the township.

The question of text-book uniformity, as affected by the township system, is well illustrated by the reports from this county. In the township of Alpena, which retains the district system, there were five different text-books in orthography and reading used in the several districts, three varieties of arithmetics and three different text-books in U. S. history. The township of Ossineke is divided into three districts. District No. 1, with an enrollment of 16 pupils, reported as used in the school three different text-books in each of the branches of orthography, writing, and geography, two in reading and English grammar each, and four in arithmetic. Thus in one small district

school we find seventeen different text-books used in teaching six branches of study. What quality of work can a teacher do under such conditions? And yet section 15, chapter 111, of the General School Law, provides that "The said district board shall prescribe the text-books to be used, *which shall be uniform in each subject that may be taught;*" and further, under the same section: "Each school board making a selection of text-books under this act shall make a record thereof in their proceedings." I think it is safe to assume that these provisions of law are practically ignored in one-half the school districts of the State.

In the five townships operating under the township system the text-books are uniform in each instance. The advantages of a system that secures township uniformity of text-books over a system that admits of almost endless diversity in a single district, are too obvious to require argument.

As indicating the working of the system in other states where both the district and town systems are in operation, the following testimony of State Superintendents is submitted:

The report of Superintendent Patterson of New Hampshire for 1886-7 affords material for a study of the *compulsory* change from the district to the town system, under the law of 1885. "It is found that the number of school districts has been reduced from 1890 to 275, and that the number of districts organized under special acts is only 46, which is six less than was reported the previous year. There has been a decrease of 494 schools numbering 12 scholars or less—schools that were not needed, but were necessarily kept up at a wasteful expenditure of public funds under the old system. From the same cause the average length of the schools for the whole State the past year has been 22.39 weeks, while the previous year we had but 20.37 weeks.

"If we multiply this average increase of 2.02 by 2,276, the number of schools of the State, we shall have 4,598, which shows the total number of weeks of increase which the new law has given to the schools of the State.

"The length of the village schools has not materially varied from previous years, but the outlying schools have increased, in towns which have united their small districts, from one-third to double their former length.

"The number of teachers employed in the public schools under the new law is 679 less than under the old. There have been 154 towns in which teachers from normal schools have been employed the past year, and only 142 the year previous. The average attendance to each school of the State has increased from 16.16 in 1886 to 18.73 in 1887. These are some of the results of the new law.

"The new school law has run the gauntlet of misrepresentation and abuse for a year, and has come forth stronger in itself and in the number of its friends than when it entered upon its course.

"The town reports, with hardly an exception, and many of them were prepared by boards hostile to the law when elected, comment favorably upon the results of the new system. There has been a more equitable distribution of educational opportunities than formerly, and, as a rule, better teachers have been employed and more careful supervision given to the work."

State Superintendent Dartt of Vermont says: "At the last session of the legislature a law was passed requiring all towns having the district system to vote upon the question of abolishing the districts and adopting the town system at the annual meetings in 1885 and 1886; the vote to be by ballot and opportunity to be given for discussion.

"It will be seen from the record that in the two years 16 towns have voted to adopt the town system, and one voted to return to the district system after using the town system five years."

Sup't. Dartt gives the following extracts from reports of town superintendents:

Town of Bolton.—"Five years have passed since this town entered upon the town system, and when the people had an opportunity to return to the old district system at the last annual meeting, not a single person, to all appearance, desired to do so. Surely a good argument for the town system, when almost a majority were at first bitterly opposed to it."

Town of Middletown.—"We note a very decided improvement in our schools under the town system. It is working admirably with us and fast gaining friends. Its adoption by our town is a long step in the right direction."

Town of Warren.—"This is the first year under the town system, and I am satisfied that when we get settled in the business and the people become accustomed to the new way, there will be no desire to return to the old district system with its unequal taxation. We have not had as much friction as we anticipated. Our schools are in better condition than before."

Hon. Joseph White, Secretary State Board of Education of Massachusetts, closes an argument in favor of the township system as follows:

"Such is a brief and imperfect statement of some of the objections to the continuance of the district system. Others might be urged, but it would seem that a careful consideration of the foregoing with the practical commentary which every day's experience is furnishing, could not fail to shake the convictions of any unprejudiced mind. For, after all, experience is the true test. That system will prevail in the end which furnishes the best education at the least cost. And to this test I confidently appeal. I do not overstate when I assert that wherever the experiment has been tried it has been most satisfactory, and no persuasions would induce the people to return to the old system. Could the most strenuous opponents of a change be induced to visit one or more towns which have adopted the town system, or where it has never been abandoned, and carefully examine its practical workings, and compare its results with the opposite system, I would cheerfully submit the case to their decision."

It would be far beyond the province or limits of this discussion to attempt to include all the arguments and testimony favoring this system. But enough has been submitted, it would seem, to convince any fair-minded, unprejudiced person that making the civil township the unit for school organization results in:

1st—Equal school privileges for all children in the township.

2d—Equality in local school taxation.

3d—Longer terms of school.

4th—Less diversity of text-books.

5th—A large reduction in the number of local school officers.

While these are a few of the benefits that experience has proved will follow

the change from district to township organization, they are sufficient, in the absence of any serious evils, to warrant the legislature in at least, authorizing the people to adopt the system if they so desire. I would therefore most earnestly recommend the passage of an act empowering the voters of any organized civil township to vote upon the question of placing all the schools of the township, excepting the larger graded schools and such as are organized under special charter, under the control of a township board of education. I am firmly convinced that this action on the part of the legislature will ultimately result in more and greater benefits to our rural, ungraded schools than any legislation affecting public education that has been adopted since the organization of our school system, excepting, possibly, the abolition of the rate-bill.

COUNTY SUPERVISION.

The law passed at the last session of the legislature making the secretary of the county board of school examiners the visiting and supervising school officer of the county, has been in force virtually since the 26th day of September, 1887. Although but fifteen months have elapsed since the provisions of this law went into effect, it has been demonstrated that where competent and conscientious persons are selected as secretaries the benefits that were claimed would result from the change from township to county supervision have been fully realized. Unfortunately in some counties in the State men notoriously unfit for the position have succeeded in having themselves appointed to the office of secretaries, and in some instances the statute has been unjustly held responsible for the evils resulting from its improper and unsatisfactory administration. In some cases the office of secretary has been filled by men who have failed to make a success in some one of the professions, and who have sought it simply for the salary attaching to the position. These persons having no especial fitness for the position and lacking in interest and enthusiasm for the work, have performed their duties in a perfunctory way without any apparent appreciation of the magnitude of the interests intrusted to them. Of course where such persons are selected to administer the law the results will be unsatisfactory and will tend to bring the law itself into bad repute. But fortunately these cases are exceptional, and as a rule I think the change has been acceptable to the people. In many counties it has been the means of arousing greater interest among school officers and patrons in school work, thus indirectly resulting in better school-houses and more and better appliances for teaching. Other good results that have followed an intelligent and faithful administration of the law are:

1. *Longer tenure of office for teachers.*

In many cases, through the efforts of the secretary, district officers have been induced to employ their teacher for a year instead of for a single term. It is conceded that one of the greatest evils connected with the management of our rural schools, is the frequent changes of teachers, and the reforms accomplished in this regard cannot fail to result in great good to the country schools.

2. Greater uniformity in text-books.

From reports received from county secretaries it is shown that this matter has been given considerable attention and in many instances township uniformity has already been secured and in one case the secretary reports that the text-books used are uniform throughout the county.

3. Improvement in the sanitary condition of the schoolhouses and surroundings.

4. The schools have been more generally supplied with apparatus and appliances for teaching.

5. In granting certificates to teachers, the success of the applicant in imparting instruction and in managing a school have received more consideration than under the old law.

The above are but a few of the reforms that have been brought about directly through the efforts of judicious and intelligent officers. It rests ultimately with the people to secure the services of this class of men in every county in the State. To secure this result the voters in each township should see to it that none but competent and trustworthy persons are chosen for the office of school inspectors. This would insure the selection of suitable persons as members of the board of school examiners, with whom rests the choice of secretary. If the ultimate effect of the provisions of law regulating the appointment of secretary should be, as I firmly believe it will, to insure the exercise of greater care in the election of township school inspectors, the present temporary evils resulting from incompetent officials will be more than compensated for by the improvement in character and quality of our township school officers.

I would call especial attention to the extracts from reports received from county secretaries submitted herewith, which furnishes the best available means of information regarding the work being accomplished by these officers under the new law.

REPORTS FROM SECRETARIES OF COUNTY BOARDS OF EXAMINERS.

ARENAC COUNTY.

A large majority of the citizens of this county have expressed themselves as well pleased with the condition of the schools of our county, and believe that our schools will compare favorably with the schools of any county in the State.

I made a tour of the county twice, and a number of the schools I visited four times, and I can truthfully say that the schools of this county to-day are in much better condition than they were one year ago. Many of the school officers carried out my suggestions with reference to charts, maps, globes, etc., which encouraged the teachers to do more and better work.

J. H. BELKNAP.

Secretary.

ALLEGAN COUNTY.

In accordance with the provisions of the statute I have the honor to submit the following statement of school work performed in this county during the school year ending September 1, 1888:

I entered upon my duties on the 28th day of September, 1887, and immediately began my labors under the present law.

My jurisdiction extends over twenty-four townships, comprising 184 school districts, including ten graded schools.

I have held eight public examinations; 375 persons applied for certificates. The board of examiners have granted five certificates of the first grade; forty-three of the second grade; 253 of the third grade, and I have also granted fifteen special certificates.

The board have adopted the rule of issuing certificates to those teachers who have taught successful schools for several terms, and have earned a high standing from previous examinations. This class of teachers are advised to study for the more advanced grades, and we have found that this course has furnished an excellent incentive to encourage our teachers to efforts of improvement.

We have 314 licensed teachers in this county, and 141 of them report that they make teaching a permanent occupation. There is no lack of teachers in this county, as the graduates of our graded schools, together with those

who attend the normal classes held in connection therewith, furnish us an ample supply.

We have also followed the practice of limiting beginners to six months, so that we might inform ourselves as to the ability of this class of applicants to execute good school work. If upon visitation we find that they are likely to develop into efficient teachers, they are continued; if not, they are dropped from the list. The observance of this rule has saved us much trouble, and is just to all parties. The examinations are both oral and written, and we also obtain from applicants, statements as to the preparation they have made to fit them for the work.

I commenced the work of school visitation as soon as the schools opened in the fall, and continued the work till the close of the spring terms.

I made 215 visits during the year to the schools in the county, and the assistant visitor, Rev. J. F. Taylor, made 41 visits; total 256. In this branch of the work we adopted the practice of making a complete report of the condition of the school from personal observation, as required by the blanks furnished by the Department. We also examined the classes on the work passed over in the various branches taught in school, commending the pupils where they deserved it, counseling with the teachers as to the character of the work the school ought to do, and always urging the pupils to put forth their best efforts to improve the advantages that the schools afford, and to make them the means of building upright characters.

In these visitations we have been uniformly received kindly by both teachers and pupils, and I am confident that this part of the work has resulted in great benefit to the schools in awakening an increased interest in their exercises, and encouraging the teachers as well as the pupils. On these occasions we have not deemed it best to indulge in severe criticism of the defects we have observed, but have kindly pointed out better methods and tried to arouse new vigor and enthusiasm in the work.

We have been favored in this county with two State teachers' institutes during the year. These institutes were ably conducted and largely attended. Our teachers fully appreciate the advantages that such meetings afford and I regard them among the most effective means to awaken enthusiasm, create a fraternal spirit, arouse the people to an appreciation of the value and benefits of our public schools, and to cultivate a professional pride in the practice of teaching.

I also held educational meetings during the winter months at Burnip's Corners, Monterey Centre, Watson Corners, Wayland, Allegan and Douglas. These meetings were all well attended, and the time was principally employed in exemplifying methods of good school work adapted to the needs of the rural district schools. Essays were read by some of the more experienced teachers on subjects germane to common school education. School officers and patrons were invited to attend these meetings and the results have been such as to encourage me to continue them during the ensuing year.

I have advised our teachers to close the work of each term of school with public exercises consisting of rhetorical, readings, essays and music, inviting parents to attend, and this has become quite generally the practice. These exercises have proven a valuable means of holding the interest of the parents in the work of the schools, and in creating emulation among the pupils. Teachers report very favorably on this line of work and I shall encourage its continuance in the future.

We hear much in these days about the poor quality of instruction in the rural district schools. In fact there is a tendency to belittle the important work which they do. I think that much of this opinion arises from a lack of knowledge of the quality of work that these schools actually accomplish. During the last year while visiting the rural schools I have observed some excellent school work.

Almost invariably where the conditions are favorable to good school work, I have found effective and faithful teaching. I am convinced from long observation of the work of both graded and rural schools that the average rural school teacher is as efficient as the average graded school teacher.

In the work of the rural school teacher there is less that is perfunctory, less of routine, more flexibility in the classifications and more adaptation of the instruction to the individual needs of the pupils. These considerations lead me to believe that there is no better place, under proper conditions, with the necessary appliances, to educate a child in all the common branches and some of the higher English than a good rural district school, when conducted by a skilled teacher. The teachers of our rural schools have very much improved within the last twenty years by attending institutes and normal classes, and reading works and periodicals that treat of the theory and practice of teaching. A large per cent. of them have had some academic instruction, and many have completed courses of study in high schools and academies.

The progress of the rural district schools is very much impeded by the constant neglect of school district boards to perform their plain legal duties. In fact this failure on the part of school officers to discharge their official obligations is the greatest obstacle to the successful management of this class of schools. The limits of this report will not allow me to point out specifically the several acts of official negligence. The annual director's reports afford ample evidence to support this statement. These officers in very many districts do not exert themselves much in behalf of the schools beyond the simple transaction of hiring the teachers, and even this in many cases is not legally done. These officers have the custody and disbursement of over ninety thousand dollars in this county each school year. This certainly is an important trust and calls for the best business fidelity and judgment in its expenditure, when we consider the sacred cause for which it is raised.

A proper record of the official transactions of most of the districts is not kept; the law governing such transactions is ignored and openly violated; the best interests of the schools are often sacrificed to a penurious notion that the welfare of the district is being subserved by securing teachers at low wages; refusing to keep the school building and appurtenances in good repair, in not providing school furniture adapted to the comfort and health of the pupils, and by refusing to provide as the law directs those appliances necessary to the execution of good school work. In many instances under this policy the funds are allowed to accumulate in the district treasuries and are thus withheld from the very object that the people raised them to promote. These officers, in defense of their acts, claim that they do not want to hold school district offices; that they are paid nothing for their services; that they cannot afford the time necessary to the efficient discharge of their official duties; that in case they should make the provisions for the conduct of the schools as the law requires that it would awaken fierce opposition among patrons, and with these and other excuses they seek to justify their official

negligence. They assert that they are friends of the educational cause, but cannot afford the sacrifice of personal interests necessary to discharge their official duties.

Is it not time that some more efficient system should be inaugurated? The State furnishes over fifteen thousand dollars each year from its treasury to aid the people of this county in the payment of teachers' salaries. Is it not the duty of the State and has it not the right to insist that the districts that receive this bounty shall make such reasonable provisions for the education of their children that the educational funds shall make the best return possible to the people in effective teaching?

Under the present system of supervision, good and efficient teachers can be supplied for the schools. If a teacher is negligent or proves unfit for the discharge of his important duties, the remedy is at hand and can be applied at once.

But when a school building is out of repair, unfit, uncomfortable, unprovided with out-buildings necessary to the observance of the decencies of life, endangering the health of teachers and pupils, without maps, charts, globe, dictionary or blackboards in repair for illustrative work, we must pass on powerless to remedy the crying evil. What is the remedy—that is the question.

I would suggest that these conditions can be changed for the better by an amendment to the law so as to empower the board of school inspectors in each township to take charge of the business affairs of the several school districts of the townships. In other words, empower the township board of school inspectors to perform all the duties for the several school districts of the township that are now required by the district boards. Authorize the board of school inspectors to deal directly with the township treasurer in all financial transactions for the districts, which would simplify the present cumbersome method. Place each member of the board of school inspectors under bonds for the diligent and faithful discharge of his duties according to law. Limit the number of meetings of the board to be held each year at the expense of the township and pay them the same per day as they now receive for official service. Dispense with the school district boards as now constituted and allow each school district to elect at the annual school meeting one trustee to perform such duties as may be required of him by the township board of school inspectors. This course simply adds to the duties of the board of school inspectors, as they now have complete jurisdiction over the territory composing the school districts of each township, and can alter said districts as in their sound judgment and discretion may be necessary. I would allow the graded schools to remain as now constituted.

If this change could be effected, I am confident that it would greatly increase the efficiency of the rural schools and save a large sum each year to the people in the more prudent expenditure of the school funds.

One hundred and twenty of the 184 school districts in this county have a uniformity of text-books in each branch. I shall try during the ensuing school year to induce the balance to comply with the law and prescribe a uniformity.

The principals of our graded schools have kindly aided in the exercises of our educational meetings, and have earnestly co-operated with the board of examiners in advancing the qualifications of teachers.

The people of this county are deeply interested in the cause of education

and are willing at all times to bear any reasonable burden required for the support and improvement of the schools. Our teachers are earnest and the most of them are making commendable efforts to improve in the art of teaching. They are kindly, fraternal and enthusiastic, and there are no contentious elements in their ranks.

I cannot close this report without acknowledging my deep obligation to my associates on the board of examiners, Rev. J. F. Taylor, of Douglas, and Prof. J. W. Humphrey, of Wayland. I have had the honor of being associated with these gentlemen in this work since the law providing for the present system of examination of teachers first took effect, and to their good judgment, wise counsels, and faithful discharge of duty the people owe a sincere debt of gratitude, and I hope that my labors will merit their approval.

P. A. LATTA,

Secretary.

BARRY COUNTY.

In compliance with your request I herewith transmit to you a manuscript report of the work done, condition of the schools, etc., in this county:

We have held two regular and five special examinations (two last fall and three this spring,) during the year. At the regular examination in March no first grade and four second grade certificates were granted. At the regular examination in August three first grade and seven second grade certificates were granted. During the year we have granted two hundred and thirty-one third grade certificates.

It would seem at a glance that the number of licenses in the county was largely in excess of the requirements. But, owing to the low wages in the summer, there is a large number of male teachers that teach during the winter and do something else in the summer, and the fact that a large number of teachers come in from adjoining counties, get a license, teach one term, and return again to their respective homes, we find it necessary to carry from fifty to seventy-five licenses more than is required to supply the schools.

We have, for a number of years, held the standard of requirements for a third grade at a minimum of 65 per cent., with a required average of 75 per cent., but owing to the increased supply of teachers, the Board of Examiners have decided to raise the required average for this grade to 80 per cent.

The examination questions received during the year have given good satisfaction, much more so than during the previous year, from the fact that they have been of more general application.

Owing to the fact that I did not receive the secretaryship until the last of September, the imperfect condition of the records, the work of the examinations, and that most country schools close in October and do not open until about the middle of November, I did not undertake to make a business of school visitation until about the twentieth of November.

I have endeavored to visit every school in the county and have visited all but four. Three of these I went to visit between the first and twentieth of June and found them closed, and the other had the house burned down in midwinter and consequently had no school during the balance of the year.

In my work of school supervision I have constantly kept in view two objects: 1st, to determine the ability of the teacher in governing and instructing, and 2d, to strive by all the means in my power to increase that ability.

There have been two meetings of the County Teachers' Association which, considering the inclemency of the weather, were well attended and quite enthusiastic. I have held four institute meetings which were well attended by both teachers and patrons who seemed to be highly pleased with the work done.

There has been a marked improvement in the condition and management of the schools of this county during the last few years, and the work is being done more systematically than formerly. Teachers and patrons recognize the fact that it is not enough to know what to teach, but, also, how to teach. The schools of this county have generally been conducted quite successfully during the past year. There has been but one failure and that for want of ability to govern, and one other complaint of immorality which was thoroughly investigated by the Board of Examiners and dismissed for want of satisfactory proof to sustain the complaint. One great drawback in the management of our rural schools is the fact that so few teachers make teaching a permanent business. The gentlemen find some business more permanent and profitable, and the ladies marry. Consequently the ranks are constantly recruited by persons without experience and a large part of normal training and institute work is lost.

Few schools in the county have a fair supply of apparatus, and more than one-half of them have none whatever. Many teachers make no use of apparatus when it is furnished and patrons think it useless to furnish tools to lie idle in the corner. I think the question of "how to use apparatus" should receive careful attention at the hands of institute workers.

While there are many good houses in the county yet the condition of many of them is exceedingly poor and in some neighborhoods the financial condition of the people is such that it is almost impossible for them to build new ones.

But few houses have sufficient blackboard and much of that found is in a deplorable condition.

But few houses have any system of ventilation that is worthy the name. The only arrangement for ventilation found in most country school houses is a register opening into the space between the outer walls or a hole through the ceiling above the stove, and these, owing to the conditions, permit the free ingress of cold air but not the egress of foul air, thus counteracting the purpose for which they were intended. I think that in all plans and specifications made by the State department for the construction of school houses, philosophical ventilation and how to apply it should receive prominent notice. Few persons in the country know anything about the philosophy of ventilation, and think that all that is necessary is to make a hole somewhere to let the air in or out.

The present system of free schools is based upon the principle that the perpetuity of the government and the safety of our free institutions rests upon the intelligence of the people. If this be true it seems to me that the burdens imposed for the purposes of education should be as nearly equally distributed as possible. Yet there are districts in this county with an assessed valuation of more than one hundred thousand dollars whose people have fine farms in good condition and are in easy circumstances and in which the one mill tax and primary school fund nearly or quite support the school and its maintenance is scarcely felt. Again there are others in this county of less than twenty-five thousand dollars valuation. The land is poor and the peo-

ple are poor, and yet to maintain their schools for a reasonable length of time during the year they are obliged to raise a special school tax equal to at least one-half of one per cent. of the assessed valuation.

Would it not distribute the burdens more equally to raise a part of the necessary funds, at least, for the maintenance of the district schools by a State tax and divide the same among the several districts in proportion to the number of months of school kept by them during the previous year?

One great drawback to systemizing the work of the district schools of this county is the non-uniformity of text-books and the weakness or inapplicability of the law in regard to the matter. Many district boards make an adoption to comply with the law but give the matter no further attention, and the old books remain, or if new ones are introduced, the uniformity is soon destroyed by permitting incoming pupils to introduce whatever text-books they may happen to be in possession of.

In my judgment the township or county ought to be the smallest possible unit in the establishment of a uniform series of text-books.

With the multiplicity of text-books and such a variation of grades for the same numbers and a want of comprehension of the subject by school officers and teachers, I think it will be utterly impossible for the secretary of the board of examiners of this county to successfully grade the schools of this county and maintain the same for any considerable length of time.

DANIEL C. WARNER,

Secretary.

BENZIE COUNTY.

I have made 72 visits in the schools of the county during the year, visiting nearly every school once *each* term, thus making the average length of visits to each school district five hours. Fifty-nine different teachers have been employed in the schools and but eighteen of these were found in the same school throughout the year, eleven of these being in the Frankfort schools.

Forty-four teachers are taking educational papers.

OUR SCHOOLS NEED

longer terms of school; less frequent change of teachers; more school apparatus; more books for use in the schoolrooms, especially more readers; more and better blackboards in nearly every schoolhouse in the county; improvement in school grounds; at the least eight new schoolhouses; school officers who will interest themselves in the school and visit it.

The principal obstacles in the way of improvement I consider are:

1st. Want of interest on part of parents. Parents do not give sufficient attention to the schools in which their children are being educated. Very few manifest enough interest in the school to visit it, and many do not see the importance of sending their children regularly. It is not uncommon to find parents who do not furnish sufficient books for their children's use in the schoolroom.

2d. Too little care is given in the selection of school officers.

Officers too often have little interest in the school farther than to employ teachers who will teach for the least compensation.

At the annual joint meeting of the Chairmen of Boards of School Inspectors and the County Examiners, the following resolution was passed:

Resolved, That we hear with pleasure the growing interest in favor of the "township system" of school districts, among those most interested in education, and that we most earnestly request the next legislature of our State to enact a law that will give us such a system.

MRS. ROSE WOODWARD,
Secretary.

BERRIEN COUNTY.

In compliance with the statute and your request I herewith submit the annual statistical and manuscript report of the schools of Berrien county for the year ending September 1, 1888. The schools have all been visited in the county that come under the jurisdiction or supervision of the secretary of the board of examiners. Immediately after my appointment as secretary I issued a printed circular to every teacher and school officer in the county, calling their attention to the wants and needs of the schools as I understood them. I also called their attention to the necessity of grading the district schools in a proper and systematic manner, showing the advantages of a system of grading the schools in the county above the haphazard, ungraded system, and inviting their hearty co-operation in the work, that by working together we might in a measure promote the educational interest of the county. At the beginning of my official visits to the district schools I found in many cases the pupils dictating to the teacher the studies that they would pursue, and the classes in which they would recite. And in many cases I am sorry to say I found the teachers pandering to the whims of the pupils, and well meaning, but misguided parents, simply for the sake of a little false popularity. To correct this growing evil I forwarded to each teacher and director in the county an outline course of study to be pursued in school, similar to the course prescribed by the State department four years ago. I also sent blank reports to the teachers, requiring them to make monthly examinations of their classes in school. And at the close of the term to forward to my office the name, age and grade of every pupil in school, the studies pursued by each, and the average standing in their classes and studies. I have requested the teachers in all the schools to leave a written report for the succeeding teacher of the condition and advancement of the school and the standing and grade of every pupil.

I am encouraged in visiting some of the schools twice during the year to find that an effort has been made to systematize the work in the schoolroom. The reports received from nearly all the teachers in the county indicate that the patrons of the schools are slowly but gradually beginning to see the advantages of a system over no system in school work, and that a good common school education can only be acquired by regular steps of gradation. I am glad to report that through the co-operation of some of our best teachers and schoolboards, that some good has been accomplished by a more thorough and systematic manner of work than heretofore in the schoolroom. I am of the firm opinion, which has been gained by personal observation and experience, that our present school system is not what it should be until we have a good township system inaugurated by healthy legislation; and the earlier it is effected the better. The graded schools in the city of Niles, villages of Buchanan, Galien, Three Oaks, New Buffalo, Berrien Springs, St. Joseph, Benton Harbor and Watervliet are second to none in the State. As I have

stated before, the country schools lack system and grading. I regret to report that I have been obliged to request the resignation of five teachers during the past year on account of their lack of methods and not knowing how to teach, and a lack of discipline and school government.

One great obstacle retarding the progressive steps in school work is inefficient school boards; men who will go on the cheap scale are too frequently elected school officers. Money is too often taken into consideration instead of the future good of the boys and girls. We are glad to note however that this evil is confined to certain localities and not so general as formally. More teachers have been engaged for the entire school year than last year, which is a step in the right direction. With many teachers there has been a marked improvement in qualification for teaching, as shown by their work on examination for certificates as teachers, and by their earnestness and progress while teaching, consequently there has been an improvement in the schools where such teachers were employed.

If the time would come, when teachers would secure a more liberal salary, and as an inducement to remain longer in the profession, more satisfactory results would be obtained. The examination of teachers has been the most perplexing question with which we have come in contact. How to select the best of less than two hundred teachers, out of more than five hundred applicants is quite a question, even when you are acquainted with most of them. We have tried to make the examinations thorough, and at the same time conduct them in such a manner as to lead to more practical and thorough work. I am of the opinion that none should be granted a certificate under eighteen years of age, notwithstanding the statute to the contrary. We deem it right, in justice to the schools, and hope the time is not far distant when the schools will be supplied with teachers of more mature judgment than can be had by persons under eighteen or twenty years of age. Book knowledge is not all that is needed to make a good teacher. This may be had younger, but the judgment and ability to meet successfully every occurrence of the schoolroom comes later. Give us strong men and women in place of boys and girls, and pay them sufficiently so as to retain them. In conclusion, I wish to tender my thanks to the many who have so cheerfully assisted me in my labors during the past year. And especially to Messrs. Henry C. Crosby and John C. Lawrence, who have been associated with me as members of the Board of School Examiners for the past seven years, and whose advice I have so often asked, which has been so cheerfully and readily given. Words will not express my gratitude to them for their coöperation and assistance.

My sincere thanks are due to the teachers, citizens, editors and directors for their hearty coöperation; to the Department of Public Instruction for so many unmerited courtesies; and to Messrs. Barbour, Cheever, Aleshire and Buck for the excellent work done at the County Institute this year. Hoping and expecting through God's blessing a prosperous year, I am,

Respectfully yours, etc.,

CYRUS B. GROAT,

Secretary.

CHEBOYGAN COUNTY.

I herewith transmit my report of the schools in Cheboygan county.

This county is a sparsely settled one, nearly 50 per cent. of all pupils being included within a radius of one mile from Cheboygan, the county seat.

We have 52 organized districts, all except two having schoolhouses of some kind. Two new frame houses have been built during the summer. The major number of the houses are of logs. We also have some very cosy frame houses. The old, straight-backed wooden settees are things of the past, nearly all of our houses being seated with some good seat. One great want is more and better blackboards; in a lesser degree we also need maps, globes and dictionaries. Our districts are, as a rule, poor, and it is hard work to get them to procure these helps. Engaged in hewing homes out of the forests, they well know how hard and wearily every cent is earned. But, to their credit, be it recorded, few of them but fit out the schoolhouse as well as, if not better, than their own homes.

The trouble seems to be that when they have provided a comfortable school house, they imagine that the teacher should do all the rest. I have labored with the school boards, to induce them to give their teachers better outfits. In some cases I have been successful and in others I have most ignominiously failed. I shall try again.

Could the township be the unit and furnish these things, much of the land that now pays no school tax would bear its share of the burden, and our schools would be better supplied with educational aids and the settlers taxes would not be as heavy as now.

The sentiment of the chairmen of the township boards of school inspectors was unanimous in favor of the township district system.

I have visited every school in the county except one: have visited some twice and a few three times. I think that our teachers, as a class, are improving year by year. Our county teachers' association is doing good work, and, upon the whole the educational outlook in this county is good.

W. C. THOMPSON,
Secretary.

CHIPPEWA COUNTY.

When I entered on the duties of secretary of county board of school examiners I found no record of any sort; a list of about 15 teachers being subsequently obtained after considerable work.

I found later that no reports had been forwarded to your office by last secretary.

I found the schools of the county burdened with a number of poor, unqualified teachers and a system of almost free permits to all comers. During the year the records have been kept faithfully; the list of teachers printed up to August 15.

The reports have been made out by me and sent to you. The class of teachers referred to above has been cleaned out, and the grade of the teachers in the county correspondingly raised.

Now as to suggestions. I experienced great difficulty in my work of visiting from three reasons:

1st. Not knowing when the schools are in session, having no means to ascertain. For example, I traveled 24 miles and found only one school in session.

2d. Not knowing in what part of the district the school houses are located.

3rd. Not knowing how to reach them.

The last two could be overcome by having a map of the county showing the district boundaries. Have tried hard to secure one but cannot get replies

from the township clerks. Could not some way be managed to secure this? Such a map, showing not only the boundaries, but the locations of the school-houses and roads thereto, would be almost invaluable in the secretary's office.

S. P. TRACY,
Secretary.

GRAND TRAVERSE COUNTY.

In accordance with your instructions of July 24, 1888, I herewith submit my annual report:

The schools in this county are in as good condition as could be expected from their being in a comparatively new country, made up of all nationalities, and of all grades and conditions of intelligence.

In such a field the work of the earnest teacher is necessarily hard. My work has been to lighten the labors of the teachers by securing uniformity of text-books as much as possible and to secure from each teacher good honest fundamental work.

The Examining Board have labored to keep up the standard of education and to give preference to live, earnest and common sense teachers.

In this work they feel that they have been ably assisted by the character and kind of questions furnished by the State for examinations.

The experience of the past year will aid us in laying out the work and performing it more satisfactorily during the coming year.

In my opinion the text-books of a county, at least, should be uniform. To secure this and other ends I should favor a township district, and further I think the text-books used in a district should be furnished by the district. Uniformity in text-books is necessary, but one of the most burdensome taxes upon our laboring men with large families, and they are very likely to have them, is the continual cost of text-books. Many of the children of such families are debarred the privilege of attending school on that account.

In conclusion I wish to express the thanks of myself and the board for the kindness and courtesy shown us by the Department of Public Instruction during the year.

LORIN ROBERTS,
Secretary.

IONIA COUNTY.

The work of improving the schools in our county is now moving off nicely. We are having many of the schools adopt a grade, or rather the course for "country schools."

I can see in my visiting this fall that the work that was done at the four week's institute has improved our teachers very much. Teachers who had no good ideas of work before are now taking up the work as they should. They are beginning to teach geography, language, reading and numbers. Topics which have been neglected before. I hope that we can have another four week's institute next summer.

Our work for the coming year will be to work up the grade for the country schools, to work for a uniformity of text books, and to strive to improve teachers in their methods of teaching. So much for the schools as such. Next we shall push the reading circle just as much as we can.

C. L. BEMIS,
Secretary.

IRON COUNTY.

The work of the board of school examiners has been confined principally to the examination of teachers.

Owing to the distance from one school to another no township teachers or parents meetings have been held.

The Menominee Range Teachers' Association, which held an interesting meeting in Crystal Falls, in April, was attended by nearly all the teachers of the county.

The teachers, though often inexperienced and usually without normal training, are progressive, taking advantage of all means of improvement.

School boards are usually competent and desirous of making the schools a success.

The school buildings are all comfortable and in good repair and are being provided with all necessary appliances.

I regard the schools of the county as in good condition and constantly improving.

G. L. WOODWORTH,
Secretary.

ISABELLA COUNTY.

In transmitting to you my annual report I regret that I cannot say more about the improvement of the schools in the county, for, although we have done much that will result in improvement, I can as yet see but little progress. When I accepted the office of secretary for this county, like most young men I imagined that things could be re-arranged and re-organized in a very short time and so planned, but as I close my year the work is just begun, hence I say there has been but little apparent progress. However, the work that has been accomplished is a foundation for a general improvement if my successor carries it forward, as he asserts that he will. Turning to the subject of teachers I can say here we have done nobly, as our teachers are all thoroughly aroused, alert and striving to improve their methods. I venture to say that never before has there been such a revival of interest and professional spirit in Isabella county teachers as in the year just closed. The county teachers' association, re-enforced by the township associations, has done a grand work, for, besides the Central Association, we have four township or subordinate associations doing good work.

In our examinations, although we have striven to encourage all worthy applicants, we have gradually raised the standard until several of the "time killers" have dropped out of the ranks to be succeeded by good earnest workers. Commencing the year with more than 150 teachers of all grades we close with 120 live teachers and yet none dropped without good reason.

The county has a uniformity of text-books, most of the districts making re-adoptions during the year.

Grading of and classifying the district school has received much attention during the year, and nearly all the teachers are working to that end.

Physiology and the effect of stimulants has not received the attention that it should. I have issued a circular on the subject and tried to arouse an interest in it.

Taken all in all our schools have not lost by the last year's operations, but will be somewhat bettered in the end.

FRED RUSSELL,
Secretary.

LAPEER COUNTY.

Inclosed find my report for the year ending to-day. As visiting officer I have devoted my time exclusively to the work of visiting schools and performing such other duties as devolved upon me.

While my report shows that each district has been visited, I might say that I endeavored to visit each district a second time in which there was a change of teachers during the year, or in which there were poor teachers employed.

I believe that a large majority of the directors for the coming year will employ their teachers for the whole year instead of from term to term, as has been heretofore done.

Many whom we found doing poor work, or who were not disposed to do better, are dropped from our lists of teachers this year.

This county is no exception to the general condition of the old counties in regard to condition of schoolhouses, apparatus, etc. However, I believe that before another year ends, with the township meetings continued, there will be a marked improvement in the buildings and appliances in use for school purposes.

We have too many school districts in the county. The township district system will be a blessing to the schools of nearly every township in the county, when they get the opportunity to vote upon it.

Selfish motives and personal jealousies prevent our boards of inspectors from changing district boundaries, which in many cases would result in great good to the educational advantages of the town.

We have almost a uniformity of text-books in the district schools.

With regard to the teaching of physiology and hygiene the work has not been entirely satisfactory. A few directors refuse to give attention to the matter, thinking it not an essential study. I think, however, that there will be no difficulty about it this coming year.

The districts are fast purchasing manikins to assist in the teaching of the subject.

C. E. PALMERLEE,
Secretary.

MANISTEE COUNTY.

The work of the Board of Examiners has been confined to the examination of teachers and the granting of certificates. Their object has been to gradually raise the standard of scholarship by closer marking on the examination papers.

That object has been attained in some degree. There seems to be a general effort on the part of the teachers to thoroughly fit themselves to teach the third grade studies.

The secretary has visited all schools that have been in session once, and with a few exceptions, twice, spending one-half day each time in a school.

The effort has been to try to bring enthusiasm into the work of teaching; to make the work as practical as possible; to break up the mere hearing of lessons; to make the work more thorough; to classify in some degree; to get

school officers interested in visiting the schools and overseeing the work; to prepare for township organizations for teachers; to get a larger attendance at the county association and institute; to introduce school journals and papers. The work has, in the opinion of the secretary, been fairly successful. There seems to be a more general interest in school matters.

JEAN McDIARMID,
Secretary.

MECOSTA COUNTY.

You suggest on the back of the accompanying report "a separate manuscript report" showing extent of work, etc.

As stated in report, I have held township teachers' meetings as suggested by you at the commencement of our work, not quite in each township, but as nearly so as could be conveniently done. They have been very interesting. The people have attended them and taken a part in the discussions.

I have visited many of the schools twice and, where necessity seemed to require, the third time.

In more than 60 of the 100 districts I have secured the presence of one member of the district board, and often the entire board.

At these visits many of them have visited the school for the first time in a year or more. We have examined carefully the condition of the school, the work being done, and where, if such were the case, more might be done. The people seem very willing to do and to furnish when they are shown the necessity.

I find good schoolhouses almost universally, a general desire to have a good teacher and a good school, and other encouraging features. There is a great lack of apparatus. In some districts, those little annoying differences have well nigh destroyed the usefulness of the school. I have visited over 400 of the patrons to harmonize disturbing elements and ascertain their desires in relation to examinations, teachers and the work in general. The other members of the board have rendered me material aid and given good advice.

The teachers, many of them young, have done their part well, and have seemed fully determined to be equal to all that was required of them. I think no year of the seven that I have been a member of the board has tried their utmost ability to answer questions, like the one just passed. Technically some of the questions in the report are not quite as they indicate, but taking the general acceptation of terms they are nearly right. In this county we are hopeful.

The experience of the past year will strengthen us materially for a better year's work in the one to come. Thank you for sending a conductor for the institute in accordance with our request; for your patience in giving us many answers to difficult questions incident to the change from the old to the new law.

P. M. BROWN,
Secretary.

MENOMINEE COUNTY.

The clerical work I do by proxy as much as possible, but I have visited the schools all but two, missed by mistake, and I have tried hard to help both teacher and scholar. I usually conduct a recitation or two to rest the teacher and

to keep my hand in, compare notes with the teacher and give or receive suggestions as may seem pertinent, and I try to leave the teacher with an idea that better work is possible, and the scholars with the feeling that their teacher is about right.

We have some excellent teachers, better I think than you will credit us with till you visit us.

The points to be especially urged are the grading of the schools and the adoption of a course of study, and in this work your circular just published is of great value. Then, too, with our large foreign population we are in need of thorough teaching of patriotism, good old fashioned patriotism. Physiology and the laws of health have been sadly neglected, but a great change is coming over our schools, and now and then a boy up and down the land is concluding that he does not want the kind of a stomach and brain which whisky and tobacco produce.

The encouraging feature of this branch of school work is that those addicted to the use of narcotics and stimulants are most hearty in support of the present teaching. I believe that every teacher in the county is doing his or her best to forward the scholars in all that goes to make up a pure and noble manhood and womanhood, yet we greatly need the enthusiasm that emanates from good institutes, from lectures or from a personal acquaintance with a State superintendent.

J. W. BIRD,
Secretary.

NEWAYGO COUNTY.

I do hereby submit the following report of my work as Secretary of the Newaygo County Board of School Examiners, for the year ending Sept. 3, 1888.

The time previous to Jan. 1, 1888, was spent in ascertaining the condition and needs of the schools of the county, and indetermining what course to take in order to render my work as efficient as possible.

Early in the year I concluded that the teachers and patrons of our schools needed to be educated as well as the children. Neither teachers or patrons seem to realize the responsibility resting upon them. It has been difficult to reach the patrons of our schools, but I think some impression has been made upon them by the aid of circulars that have been issued and mailed them.

I have also urged the teachers to make the acquaintance of the parents of children placed under their care, and to try and persuade them to visit the school and see for themselves the progress their children are making. By inquiring of teachers I find that the district schools of Newaygo county have received less than ninety visits from patrons during the past year. I confidently expect this number of visits will be multiplied several times during the year to come.

District officers also fall far short of performing their duty to the schools under their care, being negligent in so many particulars that I will not take time to enumerate them. I have made many personal calls upon school officers, and in many instances persuaded them to remedy existing evils under their control, such as increasing the amount of blackboard space, providing better fuel, putting out-houses in better condition, and other things of a like nature. I have also induced many to visit their schools with me and tried in various ways to arouse their interest in school management.

Teachers have been, as a matter of course, more easily reached and influenced; and while I give them credit for desiring to do good work, I think the majority of the existing evils in our schools can be laid to the teacher. They are deficient in many respects; some of which are as follows: lack of a fund of general knowledge; lack of knowledge as how to properly grade and classify a school; lack of system; imperfect ideas as to what constitutes an education; and various other things that a lack of time will not permit me to mention.

All these things have been brought to teachers' notice, by means of personal interviews while visiting their schools, teachers' associations, and, I am glad to say, the character of the examination questions during the year.

I have tried to make teachers understand that, in order to properly illustrate the different branches or subjects they were trying to teach, they must have a fund of general knowledge to draw from; knowledge not gained from ordinary text-books, but acquired through a systematic course of reading. I have tried to be emphatic upon this point, and inquired of every teacher visited, what books and papers they had read, and were reading; not only professional books and journals, but otherwise. I was surprised to learn that but comparatively few had ever read a work upon the subject of teaching; less than one-third were subscribers for a school journal.

I think much good has been done by my work in this line.

It has been difficult to accomplish much immediate good, in the way of gradation and classification; but the subject has been well ventilated, and the work done must bring forth good fruit in the future.

Thirteen meetings of teachers have been held in different parts of the county, and much interest has been manifested. I have taken pains to see that the subjects discussed were such as would set the teachers to thinking, and have watched them closely to see that false ideas did not prevail.

In conclusion I will say, that perhaps not as much has been done as might have been done, but I think the people as well as the teachers have been aroused, and are doing more thinking upon the subject of education than they have ever done before. If this be true, I am content.

WILL S. MILLARD,
Secretary.

OAKLAND COUNTY.

The work of our examining board I will consider under two heads: I. The examination of teachers. II. The supervision and visitation of schools.

I. *The Examination of Teachers.*—We have held examinations on all the dates recommended by you during this year. We have examined 504 applicants. We have granted 336 board certificates. We have required two days' work of first and second grade applicants; one and a half days' work of third grade applicants. We have required both oral and written work. In no case have we endorsed a certificate granted in another county. In no case have we granted or renewed a board certificate without a thorough personal examination in all the branches required. We have required an average of 95 per cent. from first grade applicants, 90 per cent. from second grade applicants, and 85 per cent. from third grade applicants before granting certificates in these respective grades. All strangers must furnish testimonials as to their moral character and standing, and first and second grade applicants must furnish satisfactory proof to us that they have actually taught successfully

the period that the law requires. Since the new law took effect we have granted one first grade certificate. We have avoided the issuing of special certificates as much as possible. Thirty specials have been granted during the year, and every one of these was by direction of the board. No certificates have been suspended or annulled. Some of the graduates of the State normal school have neglected to record their certificates.

I find the teachers of Oakland county well qualified, as a general rule, so far as education goes. Their scholarship is better than their executive ability, although the majority of them are successful managers of schools. But nearly every failure arises from a lack of ability to govern. I enclose the schedule published last year. This will help you to form a definite idea of our method of conducting examinations.

II. *The Visitation and Supervision of Schools.*—I was chosen secretary of the board October 1st last, and therefore have had only about ten months in which to do the work of a year. There are 220 school districts in this county and fourteen graded schools. I saw at once that I could not visit the schools as required without help. I therefore appointed as my assistants the school examiners, Charles W. Soulby and Fred Wieland, both of whom had had a large experience in school work in this county, and were well qualified to undertake this work. We have visited 230 schools, and have devoted one-half day to each schoolroom at each visit. We have found many defects among the district schools. There are too many small districts. There is a multiplicity of text-books in nearly one-half of the ungraded schools, and this increases the number of daily recitations, and decreases the teacher's usefulness. There is a too frequent change of teachers in the small districts, but I am pleased to note that the number of schools where the teacher is hired by the year is rapidly increasing. The school patrons do not visit and look after our schools as they ought to do. If they paid the same attention to the teachers' work that they do to what their other employees are doing, I am satisfied that our schools would advance more rapidly. With a few exceptions I find our schoolhouses and yards in fair condition, but not in nearly so good and attractive a condition as our homes. I regard the schoolhouse as a sort of second home for our children, and think it should be made as inviting and comfortable as possible. What our district schools need is some system of gradation under which the aspiring pupil can have a greater incentive to arise from one grade to another. This is where our graded schools have the advantage over our ungraded schools. I look forward hopefully to the day when we shall be able to do something more in this direction. There are several district schools in this county which are partially graded, and they are doing excellent work. We have been able to promote this work considerably this year, and hope to do more of it hereafter.

In the matter of text-books we have encouraged a uniformity as much as we could, but it is a discouraging thing to undertake as the law now is. And this leads me to say a word about district boards. It is their imperative duty to adopt a uniformity of text-books, but they do not, in very many cases, attempt to do so. We have prepared a circular to district boards which will soon be ready for distribution, and I will forward a copy of it to you. In this circular we call their attention to their duties and the defects we have noticed, and earnestly urge them to exercise more zeal in the discharge of their work.

As a whole, we find the schools of Oakland county improving and pros-

pering. The teachers are becoming better qualified. There are not so many failures in government. The work of teaching and of supervision is more uniform than heretofore. As an illustration of the success of our school work, let me add that I have not been called upon officially to visit any school where there was a failure. We have found our graded schools in excellent condition.

In our work of school supervision we have seen many things wherein our schools might be improved, but we have recognized the fact that too sudden changes sometimes injure rather than improve. We aim rather to bring about a gradual and steady growth of advancement. We are pleased with the result of this year's work, and as the same men will constitute the board next year, we shall continue our work without much change in plan, but with the purpose of improving our schools as rapidly as possible under the present school system.

ELMER R. WEBSTER,
Secretary.

OCEANA COUNTY.

In compliance with your request to send you a manuscript report of my work for last year, I herewith transmit you a brief outline of the same.

My election did not occur till Nov. 14, 1887, so I had only about seven months' work among the schools.

I immediately set to work by personal talks, and by means of circulars, to impress upon the teachers the importance of a better preparation for their work. I found that some teachers were going before their schools each day but little better prepared on the lessons than their pupils and wholly unprepared "to gain and hold the attention of the pupils." They were attempting to teach school, relying solely on what they had learned in a district school or a high school. But few, comparatively few, have ever attended a Normal school, and as a result they are deficient in methods, as they have paid more attention to the acquisition of knowledge than to the imparting of that knowledge; and when a method is presented to them they seem to lack individuality enough to seize that method and make it their own. It is a lamentable fact that some teachers teach no better schools after having read a work on teaching, than before. Why? Because they are trying to follow too many methods; they are confused and bewildered; nothing is definite. I have tried to point out this error to teachers, and have endeavored to induce them to do more reading to increase their general knowledge. I am glad to say that I have succeeded beyond my expectation. A great many of the teachers have purchased works on teaching and have subscribed for educational journals within the year, whereas at the beginning of the year but few indeed took a journal and some had never read a work on teaching. So you see my efforts have been mainly to awaken the teachers to a realizing sense of their duty as teachers; to impress upon them the great responsibility of their position; to secure uniformity along certain lines; to incite them to a more thorough preparation for the important work of teaching.

I have endeavored to promote teachers' associations. We held six meetings last year, and they were well attended and considerable interest manifested.

I have visited school officers and patrons when possible and talked with them concerning their school, suggesting improvements when necessary. This

must be done with discretion, when we consider the character of many of the district officers.

Ignorance is a stubborn thing to deal with, and indifference still worse. In order to not prejudice this class too much, radical changes must be made slowly, or at least by degrees. I trust we may get rid of so many inefficient district officers soon, and have an inauguration of the "township system," which will in my judgment eradicate many of the evils now existing.

As you see by the enclosed circular, I have recommended the hiring of teachers by the year and the adoption of a course of study.

OFFICE OF SEC'Y CO. BOARD OF SCHOOL EXAMINERS, }
Hart, Mich., August 15, 1888.

To District Officers:

SIRS—At a joint meeting of the Chairmen of the several Boards of School Inspectors and the Examining Board, held at Hart, August 7, the following resolution was adopted:

Resolved, That it is the sense of this meeting that the interests of the schools of the county would be advanced, if teachers were engaged by the year, and the school year divided into fall, winter and spring terms.

I find that usually the best schools are those in which the teacher is retained for the full year. This is practiced in many of the older counties, and everywhere gives the best of results. I trust that you will, at your annual meeting, give this matter your careful consideration, and report to this office soon after your meeting, using the enclosed card.

Permit me, also, to call your attention to the accompanying course of study and daily program, for country schools. This has grown out of a request of the secretaries throughout the State, and is prepared by the best talent in the State.

Nothing works well without system, and many teachers fail to properly systematize their work. This course of study if properly carried into effect cannot fail to ameliorate the condition of our common schools, upon which the safety and perpetuity of the nation depends.

As soon as your teacher is engaged please place the enclosed pamphlet in his possession, requesting that he thoroughly familiarize himself with the contents before entering upon his work.

Any suggestions you may be pleased to offer will be gratefully received and accorded careful attention.

Trusting there may be harmonious action all along educational lines, and earnestly desiring to aid you at all times, I am

Very respectfully yours,
C. N. SOWERS,
Secretary.

I shall push the grading of district schools this year, and get as many graded as possible. I am also organizing reading circles in different parts of the county.

There is so much to do for our schools that the magnitude of the task seems almost discouraging. But from my work last year, I feel that I have the confidence of the teachers and patrons, and I shall labor earnestly to do my best the coming year.

In my report of the condition of the schools by townships I have not given much under the head of "What is Needed for the Improvement of the Schools." I think that is answered in this report. In the aggregate what one needs they all need. Our buildings are generally good. As a whole the county has reason to be proud of her buildings. Occasionally there should be a new building; in some, more blackboard space and more apparatus. I have endeavored to see that the districts adopt text-books on the subject of physiology and hygiene. More have done so than is shown in my report, as the report was taken when I visited the school. The spirit of the law is complied

with in nearly all our schools. I have found it necessary to remind some of the compulsory school law.

Any suggestions you may be pleased to offer will be accorded careful attention.

CHAS. N. SOWERS,
Secretary.

OGEMAW COUNTY.

I missed two schools in which school has been carried on during the year, on account of not knowing when their terms, which were short, began or ended. They are both distant from here.

Our schools are, as a rule, in good condition. Though we have exacted only 70 per cent. for third grade, we have been very careful and precise in marking papers, and I believe that no certificate has been granted to an incompetent person. We have been censured for being too particular, but I believe, and know, that the board have tried to be entirely fair and impartial in all cases.

At our annual joint meeting with the chairman of the Boards of School Inspectors, I suggested the matters referred to in the following resolutions which were unanimously adopted. I believe that our schools would be greatly benefited and improved by the township district system and uniformity of text-books.

Resolved, By the School Examiners and Chairman of the Boards of School Inspectors of Ogemaw county, That we recommend to our State Superintendent of Public Instruction and to our State Legislature the advisability of amending our school laws so as to provide for the township district system and for State uniformity of text-books.

Adopted unanimously.

A. E. SHARPE,
Secretary.

ONTONAGON COUNTY.

The schools of this county are in a very flourishing condition. All the leading schools are well provided with apparatus for teaching geography, chemistry, and philosophy. Nearly all of them comply with the law in regard to teaching the effects of alcohol and narcotics.

I have visited every schoolroom in the county at least twice. Some have been visited three times. The wages paid teachers in this county will compare favorably with amounts paid in any other county in the State.

The board of examiners have visited each school in the county once in a body.

The prospects for the coming year are excellent. At Rockland, Greenland and Ontonagon the principals who managed the affairs of the schools at those places last year so efficiently have been re-engaged for the coming year, and all the teachers in the county are looking forward to the coming year with considerable enthusiasm.

NORMAN W. HAIRE,
Secretary.

OSCEOLA COUNTY.

Visiting schools in this county is attended by many difficulties and delays, at the best, but especially has this been the case during this first year. In the first place, the little hitch in the beginning of the year, caused by the

new law not taking effect when it should, was a serious one, as it put the work back a whole month, during which many of the schools were going on, some of them being a third and some a half finished when the new secretaries entered upon their duties. This county is quite new in many portions, the inhabitants being spread over large school districts, comprising, sometimes, six or seven sections, making it necessary for the children to walk from two to three miles to school; and this, taken in connection with the fact that our snows are so deep as to sometimes block the roads for days at a time, makes it seem advisable to many districts to get through all the school they can during the months of settled weather and good roads.

Again, others, on account of needing all hands on the farm, crowd all their school into the months of spring and winter. Not being posted as to these particular habits it has happened that I have failed to reach some of the schools while in session. Again, I have labored under a disadvantage in getting the required statistics, for it was late in the season before I really knew what would be wanted, or desirable, and when the blank questions did come, I had been over some of the ground and had let some papers go out of my hands, which had I known it, contained data which I wanted and which it cost me no small trouble to obtain from other sources. For instance, we are asked to report the number of pupils, or children in each school district census, and also the number in each district between the ages of eight and fourteen years. These figures could only be ascertained from the reports of the several directors, and these I had forwarded to the department at Lansing before it was made known to me that they were wanted. I have done my best to obtain them, and have succeeded in most cases. To make visits by townships, as our most respected State superintendent suggested, would, in this county, involve a great deal of extra travel, the roads not being open through all section lines.

I have therefore made my visits by sections, not a square mile, but strips of territory which I could take in a week's tour. At first, I tried to have Saturday meetings, but while I did not give it up, and if continued in office shall try it again, still I found it like rowing against wind and tide. At first there seemed quite a little interest, and the attendance was very fair, but after awhile, as the travel became more difficult, and it became understood that there was no compulsion about attending these meetings, they began straightway with one accord, to make excuses; those who most needed the help which these meetings were intended to furnish, were, of course, the first to drop off. In the rural districts schools are far apart, the roads, as a rule, bad, and the teachers nearly all ladies, so that anything like a meeting large enough to be pleasant or profitable was out of the question.

Taking all these things into account I changed my first plan of visitations, which was to make suggestions only, or with few exceptions, in teachers' meetings held for that purpose, and, seeking opportunities for private conference, have given my approvals and reprovls in that way, always endeavoring, by the utmost tact at my command, to gain the confidence of the teachers. To that end I have never said one word to the teachers, in the presence of the pupils, that could be interpreted to mean censure, or disapprobation, and I have had the satisfaction of noting, in those schools, whose teachers I have visited before, that the suggestions I have made have been "seed sown upon good ground." The great trouble with many, I may say most, of the teachers of our ungraded schools, is, that they have never had the benefit of

a good course of normal training, and are teaching as they themselves were taught. Associations and institutes can not be made to reach those most needing them, because they, as a rule, are those who teach because it is a more desirable calling than chopping or kitchen work. A teacher should be well read, and well posted on all subjects of general interest, besides being thoroughly prepared to teach the text-books of the school curriculum. But many are teaching (?) right along the line separating what they know from what they do not know, and often the uncertainty manifested by them, in conducting classes, is detected by pupils, and of course their confidence is shaken.

Here let me say, that the other members of the board are aiding the secretary, in every possible way, to raise the standard of the teachers' qualifications; by this I do not mean that we are, at each examination, exacting better papers only, though we try to keep that standard from dropping any; but we are trying, by every encouragement that we can give, to induce them to make more thorough preparation for their chosen work. The welfare of our schools demands this, but of course, that is not all that is wanting; interest on the part of the patrons manifested, not only in supplying the necessary books and apparatus, but in intelligent and constant supervision. We cannot expect to accomplish such a result, in any degree of perfection, with the present generation; the children who are being educated to-day, if we are earnest and enthusiastic enough, may see the advantages springing from this source, and discharge their duty, in that line, better. Everywhere, throughout this county, I find the children, spirited enough, but docile and teachable, and if they are not furnished with a fair education, under our present laws, the blame will rest with those having them in charge. A glance at my township reports will show a large per cent. of the schools deficient in school apparatus; such as is now considered needful for the proper rendering of instruction. This can be remedied best through the teacher. As a rule, the officers of our schools in this county furnish well when it is made apparent to them that anything is required; but it is a general feeling among them, that they have done their duty, when they have built a schoolhouse and placed therein someone denominated "teacher."

The wide awake, energetic teacher can generally get what is requisite, if he persists in demanding it. But many fear to importune, lest they displease, and so they worry along, asking nothing and getting nothing. Just here the visit of the secretary gives valuable aid. The teacher is required to do more efficient work; to do this he must have means; the officer is notified of this, and feeling the force of this wheel within a wheel, will furnish the required article with greater willingness. Again, the secretary approaches him upon various subjects pertaining to the school, and very often he is obliged to confess ignorance at first, but upon the next visit he is generally found prepared to answer. Thus a more intelligent supervision will be obtained.

"Specials" have been granted by necessity; the change of date as to examinations did not reach some, some failed to get to the examinations in the winter because of trains delayed, others were already teaching upon former certificates, and failed to come up to the required standard, and it was deemed better for the school to allow them to finish the term.

We are endeavoring to do away with this by notifying the several directors, personally, and all through the papers, that they must see that the teacher they hire holds a certificate covering the term for which he is engaged. By

this we hope to lead up to a more systematic arrangement of terms, namely, the hiring of teachers for the term of eight or ten months, commencing in Sept. as do the graded schools.

Here, it may be well to mention, is where we meet one of our greatest difficulties. School officers openly averring that they do not care whether a teacher is qualified or not, and the prospect of losing their primary fund being all that restrains them from hiring any one, who will teach "cheap."

We have been berated unmercifully, and by a "school inspector" at that, because we denied certificates to some inefficient girls, daughters of resident farmers, "who," said he, "could thus help their parents, and lessen the expenses of the district, by teaching for wages much lower than a properly qualified teacher could be obtained." In my township report I make no record of visiting the graded schools, understanding that they do not come under my supervision. However, I have visited them all, in all the grades, that I might be better able to point out to the teachers of the neighboring districts, how they may, so far as practicable, teach a parallel, course. I must, before closing, say that the school buildings of this county will, so far as I have been able to see, compare favorably with any in the State; the buildings which I have reported as "good" being really fine buildings of their kind. The grounds are, almost all, susceptible of being made wholesome and pleasant, but many are at present only cleared of the forest, some not so much as this. Very few are furnished with wells, but many procure their water from natural springs, which abound in this county, and furnish the purest water. With but few exceptions the schools can get good, wholesome water from some source.

None of the district schoolhouses have any proper arrangement for ventilation, although many of the teachers resort to some one of the many little devices for this purpose. A tin pipe, or tube, placed near the floor, and communicating with the chimney, is an easy, good and cheap way for ventilating, and one which I think can be introduced unless some better way is suggested.

To sum up the teachers: In the main they are bright, capable young people. I find them generally willing to improve themselves and their methods when once made aware of their need and the way, many, this year, passing their vacation in some one of the many training schools, taking a course of lessons. And I venture to say that the time is not far distant, when Osceola will take high rank in all these matters.

R. C. HEPBURN,
Secretary.

OTTAWA COUNTY.

I herewith transmit the desired statistical report, as secretary of the county board of school examiners of Ottawa county, for the school year of 1887-8.

Allow me to supplement number 14, by way of explanation, by stating that the State Teachers' Institute was not held in our county during the school year just closed, until late in August, hence so few teachers are noted as having attended such institute during the year. The enrollment in that institute, I think, reached nearly 130.

Further in regard to number 17. Quite a number of the certificates granted will expire in October next, perceptibly diminishing the number named. In explanation of number of schools visited, as stated in number 26, I would say, that I was unable to visit three schools, for the reasons that one had only

a three months' term during the year and had closed before I reached the township in which the school was located in my course of visitation, and in case of the other two, I reached each district twice during the year, but found the schools not in session either time, but called upon teacher and school officer to gain what information I was able in regard to the same.

I visited nearly 50 of the schools of the county a second time for the purpose, mainly, of giving attention, often needed, to those in which a change of teachers occurred from the winter to the spring term; inexperienced teachers, comparatively, being largely employed.

Relative to teaching of physiology, etc., numbers 39 and 40—in addition to the number of schools named, several others might be named in which teaching has been given orally, so that, with very few exceptions indeed, that branch of study has been taught in the schools. I am hopeful that during the incoming school year a text-book will be adopted and used in every school now not using, as the law directs.

In conclusion I rejoice that quite an additional interest seems to have been awakened on the part of school officers, patrons and teachers in the promotion of the best interests of the public schools of our county, brought about in part by the visitation of the schools, consultations with such officers, patrons and teachers, supplemented by the very interesting and profitable instruction of the summer normal school at Holland City, of six weeks' duration, and of the State teachers' institute, immediately following, pronounced by those in attendance to be one of the most interesting and practical of any yet held in our county as to instructions and suggestions given. About 100 were in attendance as members of the normal and nearly 130 I think of the institute. The spirit of those two teachers' schools will doubtless enter largely into the school work of our teachers during the school year 1888-9, and the schools greatly benefited by the thorough and eminently practical instruction and hints given as to teaching and conducting a school successfully.

It is my aim, with assistance of my associates of the board of examiners, chairmen of school inspectors of the several townships, school officers and others interested, as a prominent duty, and as soon as possible, to bring about such a grading of the schools of the county (where a change in that respect may be needed) as will enable us to introduce, without unnecessary delay, the course of study furnished us by the State department in pamphlet form, so far as such can be suited to the needs of the schools in their diversified conditions. By such and other means, with a vigorous visitation of the schools and proper consultations with teachers and school officers, I hope to find our schools making rapid progress, during the school year now drawing to a close, in all directions that will result in securing to those receiving instruction a good, practical knowledge of the branches under consideration, good morals and habits, with no stint of downright, good common sense.

A. W. TAYLOR,
Secretary.

PRESQUE ISLE COUNTY.

With respect to the condition of buildings, premises, etc., I submit the following:

No. of districts visited	29
No. of buildings in good condition	13

No. of buildings in fair condition	10
No. of buildings unfit for use	8

Those named as unfit for use are in a very deplorable condition; they are in districts that are extremely poor, where the people are unable to build better. Many of the buildings that are classed in good condition, have been built for some time, when the districts were poorly populated; but as the country has advanced in population, they have become too small, so that the children are crowded for room, and the pupils are compelled to breathe over and over again the air which becomes foul.

It must be remembered that the connection of good schoolhouses with good schools is now conceded by every intelligent friend of popular education. Indeed, it is hardly possible to have a good school without a good schoolhouse, and the ultimate success of our whole system of common schools depends as much on a thorough reform in the construction, furniture and care of schoolhouses, as upon any other single circumstance whatever.

The people should bear in mind and be encouraged by the fact that when each district shall be provided with a suitable schoolhouse, the expense will not recur for a generation. Parents should also remember that the interest which their children take in their studies, and the progress in the acquisition of learning, must materially depend upon the condition, location, and general arrangement of the schoolhouse which they occupy. If it is located without reference to the taste, health, or comfort of teacher or pupil; if it stands on the border of a swampy moor, on the top of a barren knoll, in the middle of a bleak plain, or in any other exposed, unpleasant, uncomfortable spot; if it is destitute of playground, enclosure, shrub, or shade tree, and everything else calculated to render it pleasing and attractive; if its ceiling is only eight or ten feet high instead of 12 or 14; if its dimensions are so contracted as to afford, on an average, only 40 or 50 feet of cubic air to each pupil, instead of 150; if no provision is made for a constant supply of that indispensable element of health and life—pure air, except the rents and crevices which time and wanton mischief have made; if it is so utterly destitute of internal convenience and external attraction, as to resemble a gloomy prison or an Indian wigwam; if it stands in disgraceful contrast with all the other edifices of the neighborhood, public or private; if the only plan or principle which determined its size and furniture was the minimum scale of expenditure; if the pupils, while attending school in it, should suffer from heat or cold, from too much or too little light; if the quantity of air contained in it is so small as to be soon exhausted of its oxygen, and to cause its pupils to suffer from dullness, depression and headache; if, in short, it is so badly constructed, so imperfectly ventilated, so replete with vulgar ideas, and so utterly repugnant to all habits of neatness, thought, taste, or purity, as to cause the pupil to regard it as the most comfortless and wretched tenement which he ever entered, to think of it with utter repugnance, to dread instinctively the task which it imposes, and finally, to take his leave of it as of a prison from which he is but too happy to escape; if such is the condition of their schoolhouse, (which is the case with some in our county) then, surely, parents ought to remember that if their children attend school in such an inconvenient, repulsive, disparaging, unhealthy tenement, their lives will be endangered, their physical powers injured, their intellects impaired, their love of learning deadened, their moral sensibilities

blunted, their manners become vulgar, and every impression connected with the school, deepened into the most irrepressible antipathy, instead of being remembered as a source of joy and happiness.

E. ERSKINE,
Secretary.

ST. CLAIR COUNTY.

I hereby report a summary of the work of the board of examiners and also of my work as secretary:

No. of examinations.....	9
No. of districts.....	151
No. of departments.....	166
No. of third grade teachers.....	163
No. of second grade teachers.....	85
No. of first grade teachers.....	6
No. of State certificates.....	4
Whole number of qualified teachers.....	208

We find it absolutely necessary to license about forty more teachers than there are departments, from the fact that a number do not teach, others teach but a portion of the year, while others live out of the county.

With respect to the condition of buildings, premises, etc., I submit the following:

No. of districts visited.....	144
No. of buildings in good condition.....	36
No. of buildings in fair condition.....	46
No. of buildings unfit for use.....	71

Those designated as unfit for use are in a wretched condition, and it is to be regretted that one-half of the school buildings in the county are of this class. Many of them were built years ago when the country was new and the people could afford no better. At that time they were suitable, but they are now worn out. Many are too small and children are crowded into these close rooms which are at one time too hot and at another too cold, without ventilation, and they are compelled to breathe over and over again the air which necessarily becomes foul and impure.

It is not to be doubted that hundreds of children have thus inhaled the germs of disease which became a source of misery and death. It costs no more to build a house so ventilated that there is a constant supply of pure air, and all interested in the health of children should impress this matter upon those who contemplate replacing these houses with more suitable buildings.

I have met and conversed with a large number of people of the county and feel positive that there is a growing sentiment in favor of better buildings, good teachers, and better schools. And it should be remembered that our teachers are the product of our schools. By improving one we improve the other.

It is also very noticeable that in those districts that provide a good and comfortable building, secure a good teacher and furnish suitable appliances, the pupils attend school much more regularly and advance more rapidly than they do where these necessities are wanting.

I have found a few teachers who have proved absolute or partial failures in the schoolrooms. These have been either shown their errors or advised

to quit work. In all probability this will always be the case, from the fact that there are persons who can pass an examination but who cannot govern and instruct pupils well.

Occasionally we hear persons intimate that our teachers, as a class, are very poor timber. To such I would say that they are the only material furnished the examining board from which to select your teachers; and if they are not up to the desired standard, it is the fault of the system to a very large extent.

I find, however, that a large majority of the teachers are earnest workers who are doing their best to do well, and that, in many instances, under very unfavorable circumstances.

It occurs to me that many of the unfavorable conditions that are a hindrance to our teachers and pupils are due to the system itself, and the prominent educators and many thinking men throughout the State are considering the advisability of changing the present system to the township plan.

In brief, this system operates as follows: All of the schools of the township become one district. The people elect a school board at the annual election. It is the duty of these officers to build suitable school buildings, and they are to be built in accordance with plans furnished by the State Department and are to be properly lighted, seated, ventilated, and furnished with suitable apparatus. They also adopt text-books which are uniform throughout the town or county, and hire all teachers.

I believe that we might expect the following benefits under such a system:

1. The cost of maintaining the schools would be distributed equally over the entire township. At present some districts are burdened by taxation and some do not raise a penny.

2. The term of school would thus be equalized and lengthened. At present some of the children receive but five or six months' schooling while others in the same township receive ten.

3. Text-books would be uniform and should be cheaper, for the board could do much toward making lower prices at the time of adoption.

4. The board having power to locate school sites, would do away with many district quarrels over boundaries.

The following states have adopted such a system, either wholly or in part: Alabama, Connecticut, Indiana, Iowa, Maine, Massachusetts, New Hampshire, Ohio, Pennsylvania, Rhode Island, Tennessee, West Virginia, Wisconsin and Vermont.

The reports from these states show conclusively that such a system is far superior to the separate district like our own, and it is to be hoped that our people will give the matter earnest attention, for there is no one thing that is of more vital importance than the diffusion of intelligence and the universal education of the people.

HARVEY TAPPAN,
Secretary.

ST. JOSEPH COUNTY.

I have visited all of the schools in St. Joseph county once; also the schools in six townships twice. We have secured a good classification in nearly all of the schools in the county. There are many obstacles to be overcome in the way of improving the ventilation of our schoolhouses, many of which have been recently built without any regard to ventilation. You will

observe, by my report, that many of the schools have no charts, maps, globes and dictionaries. An earnest effort will be made, immediately, to secure the adoption of the "course of study for country schools" prepared under the authority of the State superintendent. I expect to call the school officers together by townships, give them a talk on the needs of the schools, show them the necessity of having proper apparatus for school work and ask them to first adopt the course of study; second, to supply every school with suitable apparatus for doing the work. The teachers of St. Joseph county are beginning to understand the importance of their calling, and I think that I may safely predict a progressive future for our teachers and schools.

SHERIDAN OSBON,
Secretary.

WASHTENAW COUNTY.

I have the honor to submit herewith my report of my work as secretary of county board of school examiners for Washtenaw county. I was elected to the office of secretary of county board October 19, 1887, and began my labors on the 20th. Since October 20, we have held two regular public examinations and four special public examinations. We have granted 191 third grade certificates, seven second grade and four first grade.

In our examination of candidates' manuscripts we have given credit for general intelligence shown by their papers as well for the questions correctly answered. We have 165 districts in this county. I have visited them all and some of them twice. I found four of them closed for the balance of the school year. The greater part of the districts have nine months' school during the school year, divided into three terms, "fall, winter and spring" terms, having the long vacation in July and August. Where this custom does not prevail I have endeavored to convince the district board and patrons of the school that nine months per year divided into three terms, is better by far than the six, seven or eight months all in one term (as I have found in some districts), and in most cases have succeeded well, and I think there will be more districts having nine months' school during the coming school year than we have had in former years in this county.

I have found a great lack of school apparatus in this county; only seventy-three districts are supplied with a dictionary; twenty-six with maps, and sixteen with a globe each. In some districts teachers have furnished globe and dictionary at their own expense. In some schoolhouses there are not blackboards provided sufficient for the wants of the school, and in others the boards are unfit for use (I refer to the blackboards).

A large number of schoolhouses in this county (155 to be exact), had no arrangement for proper ventilation when I visited them, in fact the subject of ventilation has been entirely unnoticed by officers and patrons in the construction of the schoolhouse. In quite a number of districts I have induced the board to place a six-inch pipe in such a manner that the cold air is taken off the floor, and conveyed to the chimney through the smoke pipe. Such an arrangement is very cheap and takes the cold air out of the room very thoroughly, but it is far from perfect ventilation. There are but nine district schoolhouses and but one graded school building in this county that have a system or plan for perfect ventilation, and I doubt if there is another county in the State that has as many, so poorly is the subject of warming

and ventilating understood by the masses; and we often see much ignorance of this subject displayed by architects in their plans for school buildings.

More than one-half of the schoolhouses in this county are unfit for school purposes, and this is realized, too, by the people, to quite an extent, and they say: We will build a new schoolhouse as soon as the times are better; and no doubt that in the next few years we will see a large number of new, well warmed and well ventilated schoolhouses in this county.

I have visited 161 district schoolrooms while school was in session, and 30 rooms in the graded schools, and in most cases found the teachers doing good work, some excelling in primary reading and number work. The graded schools of this county are doing grand work, the teachers are well qualified for their duties, and their labors show that they realize the grandeur of the teacher's profession. The work of our graded schools confirms me in my belief, that much more efficiency will be acquired when our district schools are conducted on a properly graded plan. And as many who have had normal instruction, and possess some knowledge of graded school work are now teaching in our common schools, I believe it to be comparatively an easy matter to so grade our schools, that we can do twice the work in the same time spent that we are now doing under our present system, which is not a system at all, but a sort of go as you please race. I have noticed, too, that those teachers who have had normal instruction show it in their discipline and general management, but more especially in their class work, proving that the influence for good of the normal school is felt in our common schools as well as in our graded schools.

The more I study our district system, as now established, the more thoroughly I am convinced that our common schools are being conducted at a loss in time and money, failing to reap the reward due to the outlay of money and labor from the manner in which they are at present conducted. I have found districts having but five months' school during the school year, and some having a less number, just enough to secure their share of the public school fund. In other districts I have learned that the district board did not hire a teacher, simply because the director could not have the privilege of hiring his particular friend. In another district the school was held but a few months, just enough to secure public money, because the moderator and assessor would not consent to pay the wages necessary to secure a well qualified teacher.

Now in both these districts were children that should have been, and would have been, in school had the district board done their duty.

During the past year I have been brought face to face with some of the evils of our district system, viz.: too few months of school during the school year. Schoolhouse continued in use when wholly unfit for children to occupy. Children roaming in the fields and street when they would have been in school had a school been provided for them. The cheapest of teachers employed where the best of teachers were needed. Securing the office of director by intrigue. This could be done only by the district system.

Judging from the facts that have come under my observation I am convinced that a commission of one man or three in each township to manage and control the schools of the township will be less expensive, and will do far more for the education of our youth by way of more months of school each year, all the schools beginning at the same time, and better schoolhouses and better work in all respect than can be done by our present district system. Then, too, the liability to change teachers every three months will be done away with.

and as the teacher's tenure of office is somewhat insured there is greater inducements for the teacher to make better preparation for teaching, and better qualified teachers will be the result. In short, a general good will be wrought upon community, with hardship upon none, but blessings upon many, by the township unit plan. Then may the time soon come, when our common schools will be properly graded and managed on the township unit plan.

E. C. WARNER,
Secretary.

WEXFORD COUNTY.

During the year the membership of the board of examiners of Wexford county has undergone several changes. From September 5, 1887, the beginning of the school year, until September 28, the date at which the law of 1887 took effect, the board consisted of Messrs. A. J. Teed, chairman, Geo. S. Hicks, secretary, and H. O. Foxworthy. September 28, at the expiration of Mr. Foxworthy's term by limitation of the new statute, A. G. Fuller was appointed secretary of the board at a salary of \$600 per annum. Another change in the membership of the board was afterward made in December, 1887, by the resignation of Mr. Hicks and the appointment by the county judge of probate of Mr. Leroy P. Champenois. With this membership the board finished its year.

EXAMINATIONS.

Six examinations of applicants for teachers' certificates have been held during the year. At these examinations 175 applicants for third grade, one for second grade, and none for first grade certificates have presented themselves. Ninety-five third grade certificates have been issued, being about fifty-four per cent. of all applications. No first or second grade certificates were issued. There have been issued also during the year twenty-three special certificates, to enable schools to open before the date of examinations when qualified teachers could not be procured. Only three special certificates have been issued to persons failing to pass examinations, and these were each granted on the request of the district boards employing them. Of these twenty-three specials sixteen were afterwards replaced by regular third grade certificates. Three failed to pass after examination and four never presented themselves for examination.

SCHOOLS.

There are sixty-eight school districts properly belonging to Wexford county, excluding the city of Cadillac. One fractional district heretofore belonging to Wexford has come under the jurisdiction of Grand Traverse county by reason of the removal of its schoolhouse across the county line. During the year school has been held in sixty-six of these districts. All but two of these schools have been officially visited during their sessions by the secretary of the board. The other two districts were visited twice each, but no school found in session. In both cases correspondence was attempted with the directors to ascertain the time when school would be found in session, but replies were not received.

A number of the more important and accessible schools were visited a number of times. Visits usually, unless the school was very small, occupied one-

half day session. At these visits such information as has been directed by the Department of Public Instruction was gathered, and such suggestions as seemed advisable and necessary given to teachers. The general condition of schools as found is not the best possible, as a rule, even under the disadvantage of a district system. Most of them are but poorly equipped with general school appliances. Many of the buildings are extremely ill adapted for school work, and when the coincidence happens, as is too often the case, of a poor teacher in a poor room with poor tools, the result with the average pupil is not a very near approach to the ideal of the State Department. There is, however, a spirit of progress developing among our teachers and a majority of them commend the stricter standard of scholarship enforced by the examining board during this year. (I say stricter instead of higher because the standard has not been raised, but more strictly enforced, and less latitude allowed to special circumstances of candidates).

At the joint meeting of the chairmen of township school inspectors and the county board of examiners, the question of the township school district was thoroughly discussed and an expression taken. Eleven townships were represented. Ten of these gave unqualified approval of the plan and one was opposed. During the year pains have been taken to bring the subject before the people as much as possible, and when explained and understood has met with almost universal approval.

Following are a few facts concerning the condition of schools as found at the time visits were made not included in the secretary's statistical report, but of possible interest, and having a bearing on the question of a township district.

The number of persons of school age in the county, exclusive of the city of Cadillac, is 2,039 by the census of 1887. Of this number, 1,267 were found enrolled in the schools, with an average daily attendance of 1,045. This daily average is 82½ per cent. of the enrollment and about 51 3-10 per cent. of the number of school age. The county has 1 brick, 47 frame, 6 board and 15 log school buildings. There are four schools with an enrollment of 2 pupils each, and 8 or 10 with not above 7. The largest enrollment in any school of one department was 70. The average wages paid teachers per month was \$28.56. The average cost in teachers' wages for each pupil per month, on the basis of the daily average attendance, was 41c. The least cost in any school, 22½c, and the greatest cost \$15.00.

The provision of the statute requiring the selection by the district board of a text-book upon the subject of physiology, hygiene, etc., has been but little heeded by the proper boards, though the teachers quite generally have taken up the work and performed the work as faithfully as was possible, giving oral instruction where parents could not be induced to procure books.

As the result of observation and experience in this county of the practical working of the law as it now stands, I would make the following suggestions of amendments that would, in my opinion, render it more effective, viz:

First. It should be the duty of directors to file copies of contracts with teachers with the secretary of the county board within ten days after execution. This would inform the secretary of the time school would be in session, and who was its teacher.

Second. The secretary should be elected by joint action of the members of the county board and the chairmen of the township boards. The judge of

probate should have nothing to do with it, as it then becomes too much of a political matter.

Third. The salary of the secretary should be absolutely fixed by statute, with perhaps power given to the county board of supervisors to increase it to meet local conditions.

Fourth. Provision should be made for the annual printing of the secretary's report of the condition of the schools, and its distribution among the school officers of the county.

A. G. FULLER,
Secretary.

EDUCATIONAL FUNDS.

THE PRIMARY SCHOOL FUNDS.

The money derived from the sale of school lands, and from escheats to the State constitute the primary school fund proper, and bear seven per cent. interest. The moneys derived from the sale of swamp lands donated by congress, constitute the primary school five per cent. fund.

The interest derived from each of these funds, together with the surplus of specific taxes remaining in the State treasury after paying the interest on the several educational funds and the interest and principal of the State debt, forms the primary school interest fund, the entire amount of which, that may be on hand at the time, is apportioned to the school districts of the State semi-annually, between the first and tenth days of May and November in each year.

The condition of these funds for the period included between the first day of October, 1887, and the thirtieth day of June, 1888, is shown by the following statement:

The Primary School Funds.

Primary School 7 per cent. fund:

In the hands of the State June 30, 1888..... \$3,473,746 96

Due from purchasers of lands June 30, 1888. 231,407 03

Total 7 per cent. fund June 30, 1888..... \$3,705,153 99

Primary School 5 per cent. fund:

In the hands of the State June 30, 1888..... \$785,718 87

Due from purchasers of lands June 30, 1888 14,375 94

Total 5 per cent. fund June 30, 1888..... \$ 800,094 81

Total school funds June 30, 1888..... \$4,505,248 80

Primary School Interest Fund.

Interest paid by the State on 7 per cent. fund..... \$239,322 40

Interest paid by holders of lands 7 per cent. fund..... 16,087 81

Total interest on 7 per cent. fund..... \$255,410 21

Interest paid by the State on 5 per cent. fund..... 30,625 58

Total income from both funds..... \$286,035 79

REPORTS OF COUNTY BOARDS OF EXAMINERS.

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Surplus of specific taxes transferred.....	\$437,582 53
Rent of land.....	1 00
Paid by trespassers on school lands.....	172 66
Total primary school interest fund.....	\$723,791 98

THE UNIVERSITY FUND.

The income derived from the University fund from October 1, 1887, to June 30, 1888, and the amount standing to the credit of the fund on the latter date, are as follows:

In the hands of the State June 30, 1888.....	\$509,515 20
Due from purchasers of lands June 30, 1888.....	38,617 81
Total fund.....	\$548,133 01
Interest paid by the State.....	\$26,660 97
Interest paid by holders of lands.....	2,830 66
Total income.....	\$29,491 63

THE AGRICULTURAL COLLEGE FUND.

This fund, derived from the sale of lands granted by the State and by the general government for the support of the College, draws 7 per cent. interest. The state of the fund at the close of the last fiscal year was as follows:

In the hands of the State June 30, 1888.....	\$346,187 55
Due from purchasers of lands June 30, 1888.....	103,691 48
Total fund.....	\$449,879 03
Interest paid by the State.....	\$17,671 32
Interest paid by holders of lands.....	7,456 82
Paid by trespassers on lands.....	1,275 27
Total income.....	\$26,408 41

THE NORMAL SCHOOL FUND.

This fund, bearing 6 per cent. interest, is derived from the sale of salt spring lands, granted by the State for the support of a Normal School. The condition of this fund and its income at the close of the last fiscal year was as follows:

In the hands of the State.....	\$63,350 12
Due from purchasers of lands.....	5,975 82
Total funds.....	\$69,325 94

SUPERINTENDENT'S REPORT.

Interest paid by the State.....	\$2,838 15
Interest paid by holders of lands.....	395 81
Total income.....	<u>\$3,233 96</u>

Very respectfully,

JOSEPH ESTABROOK,
Superintendent of Public Instruction.

STATISTICAL TABLES.

TABLE I.

Comparative Summary of Statistics for the Years 1887 and 1888.

Items.	1887.	1888.	Increase.	Decrease.
<i>Districts and Schools.</i>				
Number of townships and independent districts reporting.....	1,212	1,228	16	.....
Number of graded school districts.....	475	482	7	.....
Number of ungraded school districts.....	6,543	6,605	62	.....
Total.....	7,018	7,087	69	.....
School census of graded school districts.....	308,368	318,941	10,573	.....
School census of ungraded school districts.....	311,611	310,982	.....	629
Total.....	619,979	629,923	9,944	.....
Enrollment in graded schools.....	191,248	197,802	6,554	.....
Enrollment in ungraded schools.....	230,060	227,416	.....	2,644
Total.....	421,308	425,218	3,910	.....
Percentage of attendance in graded schools...	62.	62.	.....	.....
Percentage of attendance in ungraded schools. .	74.1	73.1	.....	1.
Percentage for the State.....	69.6	67.5	.....	2.1
Number of districts reporting having maintained school.....	6,943	7,018	70	.....
Average duration of schools in months in graded schools.....	9.4	9.5	.1	.....
Average duration of schools in months in ungraded schools.....	7.5	7.5	.....	.....
Average for the State.....	7.7	7.6	.....	.1
Number of private and select schools reported	315	294	.....	21
Number of men teachers in such schools.....	297	266	.....	31
Number of women teachers in such schools..	491	475	.....	16
Estimated number of pupils attending such schools.....	32,607	31,073	.....	1,534

TABLE I.—Continued.

Items.	1887.	1888.	Increase.	Decrease.
<i>Teachers and their Employment.</i>				
Number of teachers necessary to supply graded schools.....	8,595	8,769	174	.....
Number of teachers necessary to supply ungraded schools.....	6,608	6,614	11	.....
Total.....	10,198	10,883	185	.....
Number of men teachers employed in graded schools.....	636	657	21	.....
Number of men teachers employed in ungraded schools.....	3,200	3,116	.....	84
Total.....	3,836	3,773	.....	63
Number of women teachers employed in graded schools.....	3,135	3,304	169	.....
Number of women teachers employed in ungraded schools.....	8,595	8,686	91	.....
Total.....	11,730	11,990	260	.....
Whole number of teachers employed in graded schools.....	3,771	3,961	190	.....
Whole number of teachers employed in ungraded schools.....	11,795	11,798	.....	2
Total.....	15,566	15,754	188	.....
Average number of months taught by men in graded schools.....	8.9	8.8	.....	.1
Average number of months taught by men in ungraded schools.....	4.7	4.7	.....	.....
General average.....	5.4	5.4	.....	.....
Average number of months taught by women in graded schools.....	9.3	9.4	.1	.....
Average number of months taught by women in ungraded schools.....	4.1	4.2	.1	.....
General average.....	5.6	5.6	.....	.....
Total wages of male teachers in graded schools	\$440,161 16	\$449,121 79	\$8,960 63	.....
Total wages of male teachers in ungraded schools.....	495,502 89	477,114 38	.....	\$18,388 51
Total.....	\$935,664 05	\$926,236 17	.....	\$9,427 88

TABLE I.—Continued.

Items.	1887.	1888.	Increase.	Decrease.
Total wages of female teachers in graded schools.....	\$1,143,160 37	\$1,243,319 71	\$100,059 34	.....
Total wages of female teachers in ungraded schools.....	876,916 38	892,576 47	15,660 09	.....
Total.....	\$2,020,076 75	\$2,135,796 18	\$115,719 43	.....
Aggregate wages of all teachers in graded schools.....	\$1,583,821 53	\$1,692,341 50	\$108,519 97	.....
Aggregate wages of all teachers in ungraded schools.....	1,372,419 27	1,369,660 85	.....	\$2,728 42
Total.....	\$2,955,740 80	\$3,062,002 35	\$106,261 55	.....
Average monthly wages of male teachers in graded schools.....	\$77 43	\$77 66	.23	.....
Average monthly wages of male teachers in ungraded schools.....	83 17	82 91	.....	.26
Average wages of male teachers in all schools.....	\$45 37	\$45 67	.30	.....
Average monthly wages of female teachers in graded schools.....	\$39 16	\$39 99	.83	.....
Average monthly wages of female teachers in ungraded schools.....	25 03	24 41	.....	.62
Average wages of female teachers in all the schools.....	\$31 45	\$31 57	.12	.....
<i>Examination and Certification of Teachers.*</i>				
Number of public examinations held.....	465	461	6	.....
Number of applicants for regular certificates.....	15,612	15,907	295	.....
Number of first grade certificates granted.....	203	185	.....	18
Number of second grade certificates granted.....	532	498	.....	34
Number of third grade certificates granted.....	10,044	9,479	.....	565
Whole number of regular certificates granted.....	10,779	10,162	.....	617
Number of applicants for special certificates.....	1,687	1,934	247	.....
Number of special certificates granted.....	1,398	1,508	105	.....
Number teaching who held State or Normal School certificates.....	318	343	25	.....
Whole number of legally qualified teachers.....	11,825	10,944	.....	881
Number licensed without previous experience in teaching.....	2,162	2,053	.....	109

* No reports for 1887 were received from the following counties: Alger, Branch, Chippewa, Clare, Clinton, Delta, Emmet, Grand Traverse, Iron, Isabella, Keweenaw, Lake, Livingston, Manistowish, Ontonagon, Sanilac and Washtenaw. The items from these counties, with the exception of Clare, Delta and Iron, are taken from the reports for 1886. No reports for 1888 have been received from Clinton, Roscommon or Schoolcraft counties.

TABLE I.—Continued.

Items.	1887.	1888.	Increase.	Decrease.
Number of applicants who had attended State Normal School.....	2,574	1,951	.....	623
Number of applicants who had attended Institutes during the year.....	5,846	4,477	.....	1,369
<i>School Property.</i>				
Number of frame school houses.....	5,683	5,759	76	.....
Number of brick school houses.....	1,114	1,156	42	.....
Number of stone school houses.....	71	71	.....	.....
Number of log school houses.....	450	442	.....	8
Total.....	7,318	7,428	110	.....
Whole number of sittings in school houses. ...	534,735	535,948	1,213	.....
Estimated value of property in graded school districts.....	\$8,100,098 00	\$8,682,197 00	\$582,099 00	.....
Estimated value of property in ungraded school districts.....	4,074,591 00	4,174,906 00	100,405 00	.....
Total.....	\$12,174,599 00	\$12,857,103 00	\$682,504 00	.....
Number of districts reporting dictionaries in school.....	3,519	3,730	211	.....
Number of districts reporting globes in school.....	1,773	1,947	174	.....
Number of districts reporting maps in school.....	2,323	2,434	206	.....
<i>Financial.</i>				
Balance on hand from preceding year.....	\$1,023,923 99	\$921,239 09	.....	\$107,683 90
Amount of one mill tax received.....	676,556 01	658,209 20	.....	18,346 81
Amount of primary school interest fund received.....	665,697 44	680,653 38	\$14,954 94	.....
Amount received from non-resident tuition.....	52,187 83	54,083 09	1,845 26	.....
Amount received from district taxes.....	2,907,347 52	3,232,663 36	325,315 84	.....
Amount received from all other sources.....	659,210 40	565,943 27	.....	93,266 13
Total resources.....	\$5,969,923 19	\$6,112,739 39	\$142,817 20	.....
Amount paid male teachers.....	\$932,673 65	\$926,482 02	.....	\$6,191 63
Amount paid female teachers.....	2,018,796 50	2,146,175 31	\$127,378 81	.....
Amount paid for building and repairs.....	780,080 60	805,133 43	25,051 83	.....
Amount paid on bonded indebtedness.....	337,139 66	314,659 51	.....	22,480 15
Amount paid for all other purposes.....	999,112 33	1,044,351 10	45,238 77	.....
Balance carried to next year.....	922,117 45	875,939 02	.....	46,178 43
Total expenditures, including balance on hand.....	\$5,969,923 19	\$6,112,739 39	\$142,817 20

COMPARATIVE STATISTICS.

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TABLE I.—Continued.

Items.	1887.	1888.	Increase.	Decrease.
Total expenditures in graded school districts.	\$3,102,292 50	\$3,256,610 48	\$154,317 98	
Total expenditures in ungraded school districts.....	1,965,512 24	1,980,189 89	14,677 65	
Total net expenditures.....	\$5,067,804 74	\$5,236,800 37	\$168,995 63	
Total bonded indebtedness of districts.....	\$1,598,587 98	\$1,570,862 06		\$27,725 92
Total floating indebtedness of districts.....	128,427 66	176,188 43	\$49,760 77	
Total indebtedness.....	\$1,725,015 64	\$1,746,995 48	\$21,979 84	
Total indebtedness in graded school districts.	\$1,400,585 25	\$1,408,082 86	\$7,557 61	
Total indebtedness in ungraded school districts	324,480 39	338,902 62	14,422 23	
Total indebtedness.....	\$1,725,015 64	\$1,746,995 48	\$21,979 84	
Total amount due the districts.....	\$127,711 99	\$137,716 18	\$10,004 19	
<i>School Libraries.</i>				
Number of townships reporting libraries.....	486	519	33	
Number of districts of 100 children or more reporting libraries.....	207	312	105	
Number of districts of less than 100 children reporting libraries.....	761	857	96	
Total number of libraries.....	1,454	1,688	234	
Number of volumes in township libraries.....	184,990	129,644		5,346
Number of volumes in districts of 100 or more children.....	226,279	263,880	37,601	
Number of volumes in districts of less than 100 children.....	47,688	46,453		1,235
Total number of volumes in all the libraries	408,957	439,977	31,020	
Amount of taxes voted for township libraries.	\$7,702 58	\$3,662 32		\$4,040 26
Amount received from county treasurers for township libraries.....	10,598 93	23,123 63	\$12,524 70	
Amount received from county treasurers for district libraries.....	32,050 79	32,665 02	614 23	
Number of townships diverting moneys to general school purposes.....	456	477	21	
Number of townships forfeiting library moneys.....	250	244		6
Amount paid for support of township libraries	\$20,916 21	\$16,016 44		\$4,899 77
Amount paid for support of district libraries.	53,767 55	57,899 76	\$4,132 21	

SUPERINTENDENT'S REPORT.

TABLE I.—Continued.

Items.	1887.	1888.	Increase.	Decrease.
<i>Teachers' Institutes.</i>				
Number of State Institutes held.....	66	63	.....	3
Number of men enrolled at such institutes....	1,728	1,537	.....	191
Number of women enrolled at such institutes.	4,626	4,764	138	.....
Total enrollment.....	6,354	6,301	.....	53
Amount received from State Treasurer for such institutes.....	\$1,411 92	\$1,333 42	.....	\$78 50
Amount received from county treasurers for such institutes.....	7,542 19	9,825 73	\$2,283 54	.....
Total amount expended.....	\$8,954 11	\$11,159 15	\$2,205 04	.....
<i>Miscellaneous.</i>				
a { Number of counties reporting county teachers' associations.....	a 41	b 54	13	.....
a { Number of visits to schools by secretaries of county boards.....	a 429	b 6,564	c 6,135	.....
a { Number of visits to schools by other members of county boards.....	a 283	.....	.....	.....
Total number of visits.....	a 712	.....	.....	.....
a { Amount of per diem received by examiners.	a \$12,909 00	b \$10,822 75	.....	\$2,086 25
a { Amount paid secretaries of county boards for services.....	a 13,188 54	b 61,125 00	\$47,936 46	.....
a { Amount received by secretaries of county boards for special certificates.....	a 731 75	.....	.....	731 75
Total compensation.....	a \$27,829 29	b \$71,448 75	\$43,619 46	.....
a Amount allowed by supervisors for expenses of county boards.....	a \$1,626 08	b \$2,503 47	\$877 39	.....
Amount paid and due township inspectors for services.....	18,841 32	15,406 31	.....	\$3,435 01
Amount paid chairmen of boards of inspectors and officers of school boards.....	25,299 21	23,072 46	.....	2,226 75

a No reports from Alger, Branch, Chippewa, Clare, Clinton Delta, Emmet, Grand Traverse, Iron, Isabella, Keweenaw, Lake, Livingston, Manitou, Ontonagon, Sanilac and Washtenaw counties.

b No report received from Clinton county.

c Under the provisions of Act No. 266, Public Acts of 1887, the secretary is required to visit every school in his county at least once each year. This will explain the cause for the large increase in the number of visits made by the secretary.

APPORTIONMENT FOR MAY, 1888.

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TABLE II.

Sixth Semi-Annual Apportionment of the Primary School Interest Fund, made May 10, 1888, Rate Per Capita 66 Cents.

Counties.	Whole number of children.	Number included in apportionment.	Amount apportioned.
Totals	620,147	618,184	\$408,246 11
Alcona	1,309	1,323	\$873 18
Alger	206	188	124 08
Allegan	12,070	12,070	8,262 20
Alpena	4,530	4,530	2,989 80
Antrim	3,062	3,021	1,998 86
Arenac	1,554	1,506	993 96
Baraga	648	618	407 88
Barry	7,741	7,741	5,109 06
Bay	15,299	15,190	10,025 40
Benzie	1,511	1,511	997 26
Berrien	12,257	12,257	8,069 62
Branch	7,768	7,768	5,128 58
Calhoun	12,098	12,098	7,961 88
Cass	6,292	6,289	4,150 74
Charlevoix	3,062	3,040	2,006 40
Cheboygan	3,351	3,321	2,191 86
Chippewa	2,853	2,781	1,885 46
Clare	1,754	1,734	1,147 74
Clinton	8,564	8,564	5,652 24
Crawford	706	687	453 42
Delta	3,038	2,926	1,931 16
Eaton	9,707	9,707	6,406 62
Emmet	2,447	2,419	1,596 54
Genesee	11,744	11,744	7,751 04
Gladwin	642	577	380 82
Gogebic	1,652	1,312	865 92
Grand Traverse	3,752	3,746	2,472 86
Gratiot	9,009	9,009	5,945 94
Hillsdale	9,185	9,185	6,062 10
Houghton	10,357	10,357	6,835 62
Huron	10,251	10,102	6,667 32

SUPERINTENDENT'S REPORT.

TABLE II.—Continued.

Counties.	Whole number of children.	Number included in apportionment.	Amount apportioned.
Ingham	10,917	10,917	\$7,205 22
Ionia	9,851	9,851	6,501 66
Iosco	3,590	3,581	2,363 46
Iron	909	841	555 06
Isabella	5,714	5,598	a 3,752 42
Isle Royal			
Jackson	12,566	12,566	8,293 56
Kalamazoo	10,781	10,781	7,062 46
Kalkaska	1,500	1,500	990 00
Kent	27,852	27,208	18,853 28
Keweenaw	862	862	568 92
Lake	2,073	2,068	1,364 88
Lapeer	10,061	10,061	6,640 26
Leelanaw	2,563	2,563	1,691 56
Lenawee	14,009	14,009	9,245 94
Livingston	6,364	6,364	4,200 24
Luce	861	857	235 62
Mackinac	1,488	1,488	982 06
Macomb	10,706	10,706	7,065 96
Manistee	6,331	6,631	4,376 46
Manitou	405	372	245 52
Marquette	9,313	9,294	6,134 04
Mason	4,417	4,386	2,694 76
Mecosta	6,648	6,596	4,353 36
Menominee	6,205	6,142	4,053 73
Midland	3,213	3,227	2,120 82
Missaukee	1,020	1,013	668 58
Monroe	11,734	11,734	7,744 44
Montcalm	10,579	10,495	b 6,993 90
Montmorency	340	330	217 80
Muskegon	12,626	12,515	8,259 90
Newaygo	6,040	6,021	3,973 86
Oakland	11,355	11,355	7,494 30
Oceana	4,725	4,719	3,114 54
Ogemaw	1,270	1,252	826 32
Ontonagon	824	820	541 20
Osceola	4,752	4,752	3,136 32

a Including \$31.04 deficiency for May and November, 1887.

b " 67.20 " " " " " 1886.

APPORTIONMENT FOR MAY, 1888.

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TABLE II.—Continued.

Counties.	Whole number of children.	Number included in apportionment.	Amount apportioned.
Oscoda	451	432	\$285 12
Otsego	1,240	1,220	811 80
Ottawa	12,650	12,650	8,949 00
Presque Isle	1,333	1,372	905 53
Roscommon	447	442	291 72
Saginaw	25,169	25,169	16,611 54
St. Clair	16,836	16,836	c 11,180 43
St. Joseph	7,566	7,566	4,993 56
Sanilac	11,899	11,899	7,853 34
Schoolcraft	976	973	642 18
Shiawassee	9,080	9,080	5,959 80
Tuscola	10,732	10,687	d 7,134 18
Van Buren	9,533	9,533	6,291 78
Washtenaw	13,183	13,183	8,700 78
Wayne	82,487	82,477	54,434 32
Wexford	3,237	3,219	2,124 54

c	Including	968.67	deficiency for May and November, 1887.
d	"	80.76	" " " " 1887.

TABLE III.

Seventh Semi-Annual Apportionment of the Primary School Interest Fund, Nov. 10, 1888 ; Rate Per Capita, 49 Cents.

Counties.	Whole number of children.	Number included in apportionment.	Amount apportioned.
Totals.....	620,147	618,181	\$408,097 68
Alcona.....	1,869	1,823	873 18
Alger.....	206	188	124 08
Allegan.....	12,670	12,670	8,302 20
Alpena.....	4,580	4,580	2,989 80
Antrim.....	3,062	3,021	1,908 86
Arenac.....	1,554	1,506	923 96
Baraga.....	648	618	407 88
Barry.....	7,741	7,741	5,109 06
Bay.....	15,299	15,190	10,025 40
Benzie.....	1,511	1,511	997 26
Berrien.....	12,257	12,257	8,089 62
Branch.....	7,763	7,763	5,123 58
Calhoun.....	12,098	12,098	7,981 88
Cass.....	6,292	6,289	4,150 74
Charlevoix.....	3,082	3,040	2,006 40
Cheboygan.....	3,351	3,321	2,191 86
Chippewa.....	2,853	2,781	1,835 46
Clare.....	1,754	1,739	1,147 74
Clinton.....	8,584	8,564	5,652 24
Crawford.....	706	687	453 42
Delta.....	3,038	2,926	1,931 16
Eaton.....	9,707	9,707	6,408 62
Emmet.....	2,447	2,419	1,596 54
Genesee.....	11,744	11,744	7,751 04
Gladwin.....	642	577	880 82
Gogebic.....	1,652	1,312	865 92
Grand Traverse.....	3,752	3,746	2,472 36
Gratiot.....	9,009	9,009	5,945 94
Hillsdale.....	9,185	9,185	6,062 10
Houghton.....	10,357	10,357	6,835 62

APPORTIONMENT FOR NOVEMBER, 1888.

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TABLE III.—Continued.

Counties.	Whole number of children.	Number included in apportionment.	Amount apportioned.
Huron.....	10,251	10,102	\$6,667 32
Ingham.....	10,917	10,917	7,205 22
Ionia.....	9,851	9,851	6,501 66
Iosco.....	3,590	3,581	2,363 46
Iron.....	909	841	555 06
Isabella.....	5,714	5,593	3,691 38
Isle Royal.....			
Jackson.....	12,566	12,566	8,293 56
Kalamazoo.....	10,781	10,781	7,062 46
Kalkaska.....	1,500	1,500	990 00
Kent.....	27,852	27,808	18,853 28
Keweenaw.....	862	862	568 92
Lake.....	2,073	2,068	1,364 88
Lapeer.....	10,061	10,061	6,640 28
Leelanaw.....	2,563	2,563	1,691 58
Lenawee.....	14,109	14,009	9,245 94
Livingston.....	6,364	6,364	4,200 24
Luce.....	361	357	235 62
Mackinac.....	1,488	1,488	962 08
Macomb.....	10,706	10,706	7,065 96
Manistee.....	6,681	6,681	4,376 46
Manitou.....	405	372	245 52
Marquette.....	9,313	9,294	6,134 04
Mason.....	4,417	4,396	2,894 76
Mecosta.....	6,648	6,596	4,853 36
Menominee.....	6,205	6,142	4,053 72
Midland.....	3,280	3,264	a 2,178 66
Missaukee.....	1,020	1,013	668 58
Monroe.....	11,734	11,734	7,744 44
Montcalm.....	10,579	10,495	b 6,998 90
Montmorency.....	340	330	217 80
Muskegon.....	12,626	12,515	8,259 90
Nawaygo.....	6,040	6,021	3,973 86
Oakland.....	11,355	11,355	7,494 30
Oceana.....	4,725	4,719	3,114 54
Ogemaw.....	1,270	1,262	826 32
Ontonagon.....	824	820	541 20

a Including \$24.42 deficiency in May apportionment, 1888.

b Including \$67.20 deficiency in May and November apportionment, 1885.

SUPERINTENDENT'S REPORT.

TABLE III.—*Continued.*

Counties.	Whole number of children.	Number included in apportionment.	Amount apportioned.
Osceola	4,762	4,762	a \$3,149 52
Oscoda	451	432	285 12
Otsego	1,240	1,230	811 80
Ottawa	12,650	12,650	8,849 00
Presque Isle	1,368	1,372	905 52
Roscommon	447	442	291 72
Saginaw	25,169	25,169	16,611 54
St. Clair	16,836	16,836	11,111 76
St. Joseph	7,566	7,566	4,983 56
Sanilac	11,899	11,899	7,853 34
Schoolcraft	976	973	642 18
Shiawassee	9,080	9,080	5,959 80
Tuscola	10,782	10,687	7,053 42
Van Buren	9,533	9,533	6,291 76
Washtenaw	18,183	18,183	8,700 78
Wayne	82,487	82,477	54,434 82
Wexford	3,227	3,219	2,124 54

a Including \$6.60 deficiency in May apportionment, 1888.

TABLE IV.

General School Statistics, as Reported by School Inspectors for the year ending September 3, 1888.

Counties.	No. of townships and cities reporting.	Whole No. of school districts.	No. of districts that maintained school.	No. of graded school districts.	No. of children between five and twenty years of age.	No. of children that attended public schools.	Average No. of months school.	No. of school-houses and material of construction.				Whole No. of sittings provided in school-houses.	Estimated valuation of school property.
								Frame.	Brick.	Stone.	Log.		
Totals.....	1,223	7,087	7,018	483	629,923	425,918	7.6	5,759	1156	71	442	535,948	\$12,857,108 00
Alcona	8	24	24	1	1,433	1,018	7.4	16	----	----	5	1,174	\$16,253 00
Alger.....	5	9	8	-----	197	167	5.8	2	1	----	3	260	17,320 00
Allegan.....	24	184	184	13	12,580	9,962	7.7	173	19	----	----	12,874	175,152 00
Alpena.....	8	21	20	3	4,642	2,441	5.8	37	1	----	10	3,001	66,880 00
Antrim.....	15	66	66	3	3,066	2,520	6.8	48	2	----	17	3,392	57,840 00
Arenac.....	11	27	25	3	1,620	1,137	7.2	20	1	----	3	1,650	23,000 00
Baraga.....	4	11	9	3	834	559	6.3	7	----	----	3	690	16,368 00
Barry.....	17	147	147	5	7,725	6,500	7.7	123	14	----	2	8,659	140,850 00
Bay.....	14	51	49	5	16,489	9,529	8.0	54	11	----	5	9,442	302,840 00
Benzie.....	12	44	43	2	1,643	1,387	6.7	43	----	----	3	1,998	26,980 00
Berrien.....	21	149	148	13	12,381	9,378	8.4	119	40	----	----	12,479	308,925 00
Branch.....	17	130	130	6	7,680	6,361	8.0	85	39	11	----	8,770	198,000 00
Calhoun.....	23	165	164	8	12,164	9,005	8.0	137	35	6	----	12,150	477,790 00
Cass.....	16	116	114	5	6,081	5,014	8.0	89	26	----	----	7,003	140,900 00
Charlevoix..	16	69	67	3	3,068	2,323	6.8	57	1	----	8	3,337	43,184 00
Cheboygan....	14	54	51	5	3,480	2,189	6.0	33	1	----	16	2,588	36,520 00
Chippewa....	8	38	36	1	3,161	2,025	6.5	18	1	----	18	2,229	39,195 00
Clare.....	12	38	36	3	1,994	1,518	6.5	26	1	----	10	2,391	31,825 00
Clinton.....	16	130	129	7	8,457	6,403	7.9	106	26	----	----	8,780	152,540 00
Crawford.....	9	40	38	1	712	533	5.2	31	----	----	8	1,338	22,906 00
Delta.....	13	35	34	4	3,896	2,038	6.7	23	1	----	7	2,154	51,921 00
Eaton.....	18	147	147	10	9,654	8,048	7.7	119	38	----	----	10,355	187,875 00
Emmet.....	12	61	60	2	2,428	1,898	5.6	45	----	1	15	2,782	34,417 00
Genesee.....	20	159	159	10	11,760	8,857	7.8	150	19	----	----	11,923	312,500 00
Gladwin.....	8	22	21	-----	745	554	6.6	12	----	----	10	1,086	15,675 00
Gogebic.....	5	9	9	2	1,853	1,245	8.0	11	----	----	----	1,881	56,150 00
Gd. Traverse..	13	65	64	4	3,810	3,002	6.5	66	2	----	4	3,573	72,924 00
Gratiot.....	17	129	128	8	9,238	7,376	7.5	120	9	----	1	9,135	148,316 00

TABLE IV.—Continued.

		Census.	No. of districts that maintained school.	No. of graded school districts.	No. of children between five and twenty years of age.	No. of children that attended public schools.	Average No of months school.	No. of school-houses and material of construction.				Whole No. of sittings provided in school-houses.	Estimated valuation of school property.
								Frame.	Brick.	Stone.	Log.		
Hillsdale.....	19	167	167	10	8,868	7,364	7.9	108	57	9	---	10,390	\$237,185 00
Houghton.....	10	99	18	11	10,808	6,506	7.8	23	1	1	5	6,371	111,100 00
Huron.....	37	109	107	10	10,481	6,403	7.8	89	7	---	13	7,723	93,790 00
Ingham.....	17	125	125	9	10,724	8,356	8.1	106	38	---	---	10,199	243,170 00
Ionia.....	17	144	144	9	9,605	7,686	7.9	118	29	1	1	10,233	290,740 00
Iosco.....	11	25	24	4	3,931	2,454	6.7	26	---	---	3	2,479	36,630 00
Iron.....	8	9	9	2	899	714	8.1	8	---	---	1	324	19,330 00
Isabella.....	16	100	99	2	6,053	4,452	7.2	33	3	---	13	5,797	73,943 00
Isle Royal.....													
Jackson.....	20	157	157	10	12,593	9,339	8.4	112	57	1	---	12,068	374,345 00
Kalamazoo.....	17	136	136	7	11,064	7,896	7.8	113	33	---	---	10,639	343,750 00
Kalkaska.....	12	51	51	1	1,570	1,292	6.4	47	1	---	4	2,398	36,460 00
Kent.....	25	214	214	13	29,226	19,375	8.0	188	44	---	4	23,130	911,796 00
Keweenaw.....	7	9	9	2	991	536	7.3	10	---	---	1	1,333	16,650 00
Lake.....	13	46	45	4	2,061	1,633	7.0	39	3	---	4	2,296	36,760 00
Lapeer.....	19	133	137	11	10,077	7,533	8.6	122	10	1	1	10,111	146,552 00
Leelanaw.....	11	63	53	2	2,652	1,762	6.1	38	---	1	14	2,666	27,369 00
Lenawee.....	24	199	196	14	12,372	10,734	8.2	102	100	6	---	14,172	370,565 00
Livingston.....	16	134	133	6	6,231	5,396	8.1	118	13	3	---	7,996	131,025 00
Luce.....	3	6	5	1	394	250	6.1	3	---	---	3	318	7,326 00
Mackinac.....	11	34	31	2	1,925	1,358	4.7	14	1	---	14	1,595	24,949 00
Macomb.....	15	113	112	9	10,664	8,233	8.3	89	19	---	---	8,955	163,875 00
Manistee.....	13	52	51	6	7,065	4,329	6.5	43	3	---	3	4,692	134,635 00
Manitou.....	4	5	5	1	435	243	5.7	2	---	---	4	619	1,700 00
Marquette.....	16	36	36	9	10,375	6,376	8.4	33	4	3	9	6,179	222,340 00
Mason.....	14	56	56	1	4,706	3,567	6.7	51	5	---	8	4,565	123,165 00
Mecosta.....	17	100	96	5	6,845	5,141	7.1	36	4	---	10	6,363	112,470 00
Menominee.....	11	43	42	7	6,907	4,674	8.1	36	---	---	10	4,751	108,435 00
Midland.....	15	58	57	3	3,396	2,537	6.6	44	5	---	11	3,436	67,643 00
Missaukee.....	12	42	40	---	1,117	869	6.3	23	---	---	6	1,437	22,533 00
Monroe.....	16	133	133	6	11,525	7,344	7.9	74	64	2	1	9,325	165,465 00
Montcalm.....	22	135	135	11	10,676	8,233	8.0	129	3	---	7	10,395	155,175 00
Montmorency.....	6	20	20	---	371	293	6.6	6	---	---	14	561	7,903 00
Muskegon.....	13	93	93	9	12,446	9,232	7.3	35	13	---	6	9,033	260,035 00
Newaygo.....	22	104	103	4	6,118	4,949	7.5	90	3	---	10	6,056	82,515 00
Oakland.....	25	216	214	15	11,077	9,000	7.6	172	33	14	---	14,035	291,525 00

TABLE IV.—Continued.

Counties.	No. of townships and cities reporting.	Whole No. of school districts.	No. of districts that maintained school.	No. of graded school districts.	No. of children between five and twenty years of age.	No. of children that attended public schools.	Average No. of months school.	No. of school-houses and material of construction.				Whole No. of sittings provided in school-houses.	Estimated valuation of school property.
								Frame.	Brick.	Stone.	Log.		
Oceana.....	16	87	85	3	4,946	3,679	6.9	79	3	....	6	4,892	\$77,680 00
Ogemaw.....	16	41	39	1	1,327	1,063	6.0	32	....	....	5	1,618	24,015 00
Ontonagon....	5	11	10	3	888	567	7.0	9	....	....	2	984	10,700 00
Oscoda.....	16	85	85	5	4,982	3,812	6.9	73	....	....	11	4,533	60,935 00
Oscoda.....	9	30	30	....	429	403	4.8	16	....	....	12	863	7,925 00
Otsego.....	8	39	39	1	1,304	1,045	6.7	34	....	....	4	1,774	22,683 00
Ottawa.....	17	119	118	18	12,507	9,155	8.2	103	20	1	1	11,088	189,915 00
Presque Isle..	10	32	29	1	1,560	806	4.1	14	....	....	20	1,764	16,860 00
Roscommon..	8	18	16	1	445	306	4.5	8	....	....	6	572	6,860 00
Saginaw.....	30	148	148	10	26,330	15,066	8.0	122	24	....	7	16,622	513,371 00
St. Clair.....	26	154	154	8	17,111	11,287	7.9	143	19	....	4	13,519	265,037 00
St. Joseph....	16	125	124	9	7,335	5,872	8.1	93	32	2	....	9,083	241,500 00
Sanilac.....	26	133	133	11	11,844	8,526	8.6	121	7	....	9	9,789	101,700 00
Schoolcraft...	5	18	17	1	994	823	6.1	11	....	....	6	850	10,940 00
Shiawassee....	18	123	123	9	9,032	7,201	8.1	110	19	....	1	9,267	202,858 00
Tuscola.....	23	143	140	10	10,819	7,833	7.7	123	14	....	4	10,022	156,185 00
Van Buren....	18	155	155	14	9,356	7,697	7.6	124	22	....	....	11,065	199,900 00
Washtenaw..	22	168	167	8	13,041	8,959	8.0	112	63	7	8	11,734	412,012 00
Wayne.....	20	151	149	16	21,105	31,712	8.4	106	92	....	....	32,532	1,666,405 00
Wexford.....	16	69	68	2	3,225	2,545	6.6	56	1	....	14	3,464	74,151 00

SUPERINTENDENT'S REPORT.

TABLE V.

Employment of Teachers, as reported by School Inspectors, for the year ending September 3, 1888.

Counties.	No. of teachers required.		Whole No. teachers employed.		Aggregate No. of months taught by —		Total Wages of Teachers.			Average monthly wages.	
	Graded schools.	Un-graded schools.	Men.	Women.	Men.	Women.	Men.	Women.	Total.	Men.	Women.
Totals.....	3,769	6,614	3,773	11,990	20,281	67,659	\$928,236 17	\$2,135,796 18	\$3,062,032 35	\$45 67	\$31 57
Alcona.....	4	23	11	18	90	119	\$4,103 40	\$4,291 00	\$8,394 40	\$45 59	\$36 06
Alger.....	-----	8	1	8	10	44	500 00	2,167 50	2,667 50	50 00	49 26
Allegan.....	57	174	101	307	481	1,840	18,591 75	35,128 19	53,719 94	38 65	26 26
Alpena.....	27	40	7	79	59	471	3,936 00	16,491 00	20,427 00	66 71	35 01
Antrim.....	18	63	39	81	163	562	6,347 25	13,439 85	19,787 10	38 94	23 91
Arenac.....	6	24	9	26	63	166	2,628 00	5,434 00	8,062 00	41 71	32 18
Baraga.....	10	6	4	12	38	92	3,034 50	4,079 00	7,163 50	31 17	77 36
Barry.....	23	143	101	223	441	920	14,979 40	23,394 29	37,373 68	33 97	24 34
Bay.....	123	45	29	150	241	1,404	14,701 50	52,544 24	67,245 74	61 00	37 49
Benzle.....	10	41	15	65	65	296	2,818 38	8,561 10	11,394 48	43 27	23 96
Berrien.....	37	137	94	248	503	1,924	23,947 89	41,430 35	64,678 24	46 22	21 59
Branch.....	49	124	35	243	399	1,072	15,544 72	27,071 23	42,615 95	38 96	25 26
Calhoun.....	93	157	83	344	396	1,791	17,825 38	50,756 67	68,582 05	45 01	28 34
Cass.....	23	109	79	181	379	786	14,642 97	22,634 36	37,277 33	38 37	23 72
Charlevoix....	11	67	26	96	118	427	4,617 37	11,851 05	16,468 42	39 13	27 75
Cheboygan....	14	48	23	59	133	306	6,098 30	9,415 60	16,114 40	48 54	30 77
Chippewa.....	13	34	18	42	121	237	5,052 10	7,730 81	12,782 91	41 75	32 62
Clare.....	11	31	10	59	52	278	2,643 68	8,397 40	11,041 08	50 34	30 21
Clinton.....	33	124	84	196	331	973	14,521 95	27,055 72	41,577 67	38 12	27 79
Crawford.....	4	33	16	45	76	165	3,074 20	4,935 90	8,010 10	40 45	29 91
Delta.....	18	30	14	42	85	279	5,052 50	10,121 50	15,174 00	59 44	36 27
Eaton.....	60	136	66	264	333	1,230	12,819 96	36,771 53	49,591 49	38 49	23 73
Emmet.....	16	59	16	39	72	410	3,153 50	11,638 70	14,842 20	43 30	23 51
Genesee.....	30	157	91	272	472	1,423	18,721 57	40,701 35	59,423 42	37 55	23 14
Gladwin.....	-----	23	3	32	19	142	375 00	4,304 50	5,179 50	46 05	30 31
Gogebio.....	15	6	4	19	36	152	3,740 00	7,800 00	11,540 00	103 38	51 32
Gd. Traverse..	24	60	34	93	177	434	8,717 23	15,237 00	23,954 23	49 42	35 19
Gratiot.....	42	121	76	204	331	924	13,305 66	24,633 56	38,444 22	33 34	26 93
Hillsdale.....	51	153	114	319	474	1,349	13,363 90	23,147 07	46,510 97	33 76	22 54
Houghton.....	101	3	17	113	160	961	15,733 50	46,349 77	62,132 37	98 64	43 23

EMPLOYMENT OF TEACHERS.

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TABLE V.—Continued.

Counties.	No. of teachers required.		Whole No. teachers employed.		Aggregate No. of months taught by—		Total Wages of Teachers.			Average monthly wages.	
	Graded schools.	Un-graded schools.	Men.	Women.	Men.	Women.	Men.	Women.	Total.	Men.	Women.
Huron.....	29	98	57	96	414	628	\$16,772 58	\$18,117 75	\$34,890 33	\$40 51	\$28 85
Ingham.....	75	125	87	267	416	1,337	18,205 90	38,888 94	56,594 84	43 76	28 72
Ionia.....	62	135	84	255	426	1,268	18,172 50	35,837 05	54,009 55	42 66	28 83
Iosco.....	27	20	6	51	48	340	3,628 00	11,623 68	15,251 68	75 58	34 21
Iron.....	9	6	2	12	19	118	1,200 00	5,437 50	6,637 50	63 16	49 00
Isabella.....	16	96	55	189	254	591	9,287 25	17,187 05	26,424 30	36 56	29 00
Isle Royal.....											
Jackson.....	93	148	101	326	465	1,705	21,626 50	52,508 84	74,130 38	46 51	30 79
Kalamazoo.....	89	132	78	281	328	1,570	15,974 40	47,020 45	62,994 85	48 72	29 95
Kalkaska.....	5	45	15	68	63	308	2,783 00	9,107 54	11,890 54	44 17	30 05
Kent.....	270	195	105	547	597	3,668	30,918 88	141,669 32	172,617 70	51 84	39 44
Keweenaw.....	3	8	8	4	60	30	4,114 75	1,381 00	5,495 75	68 58	46 03
Lake.....	14	41	14	66	76	351	3,510 06	10,301 54	13,811 60	47 50	29 35
Lapeer.....	54	129	82	176	496	1,024	19,730 31	28,418 78	46,149 09	37 76	25 80
Leelanaw.....	5	51	16	68	87	271	3,069 00	7,500 82	10,569 82	35 28	27 68
Lenawee.....	94	189	111	370	551	1,898	25,729 16	49,590 38	75,319 54	46 69	21 39
Livingston.....	28	128	92	210	414	914	14,365 20	19,049 06	33,414 25	34 69	20 84
Luce.....	3	5	3	5	23	35	1,475 00	1,350 00	2,825 00	64 13	35 71
Mackinac.....	13	29	11	35	76	192	3,535 75	6,046 10	9,581 85	46 52	30 96
Macomb.....	44	102	56	143	331	902	16,124 42	24,949 30	41,073 72	42 32	27 66
Manistee.....	52	43	26	96	162	633	9,171 50	23,967 27	33,158 77	56 61	37 89
Manitou.....	1	4	5	3	17	12	510 00	315 00	825 00	30 00	26 33
Marquette.....	74	27	21	101	168	899	14,893 75	42,213 65	57,107 40	38 65	46 96
Mason.....	34	52	33	87	173	550	7,787 50	18,969 27	26,776 77	45 01	34 53
Mecosta.....	32	94	37	156	206	796	9,025 27	25,519 85	34,545 12	43 81	32 06
Menominee.....	56	85	13	86	107	726	7,785 00	30,635 75	38,370 75	72 29	42 20
Midland.....	13	54	19	80	89	435	3,817 16	14,164 01	17,981 17	42 89	32 56
Missaukee.....		42	21	44	96	184	3,771 00	6,032 81	9,803 81	39 28	32 78
Monroe.....	29	131	75	206	355	965	13,536 80	24,017 54	37,604 34	38 27	24 89
Montcalm.....	60	124	70	241	364	1,215	15,810 42	34,546 75	50,357 17	43 43	28 43
Montmorency.....		20	11	20	50	34	1,532 00	2,517 00	4,049 00	30 64	29 96
Muskegon.....	121	82	46	202	290	1,461	16,486 50	54,717 90	71,204 40	56 85	37 45
Nawaygo.....	16	97	35	173	187	733	7,838 75	20,421 35	28,310 10	42 19	27 86
Oakland.....	69	201	96	317	550	1,695	24,984 95	40,997 50	65,982 45	45 43	24 18
Oceana.....	15	84	54	118	224	497	8,900 25	13,956 10	22,856 35	39 73	28 08
Ogemaw.....	3	38	13	41	66	203	2,352 77	6,337 56	8,740 33	34 60	31 46

TABLE V.—Continued.

Counties.	No. of teachers required.		Whole No. teachers employed.		Aggregate No. of months taught by—		Total Wages of Teachers.			Average monthly wages.	
	Graded schools.	Un-graded schools.	Men.	Women.	Men.	Women.	Men.	Women.	Total.	Men.	Women.
Ontonagon....	13	7	6	14	51	107	\$4,585 00	\$4,792 50	\$9,377 50	\$39 90	\$44 79
Osceola	22	94	85	110	188	577	7,979 17	16,968 10	24,887 27	42 44	29 30
Oscoda.....	.....	80	14	29	50	97	1,394 50	2,457 17	3,851 67	27 89	25 33
Otsego	8	88	17	45	88	211	3,323 25	5,948 00	9,271 25	37 76	28 19
Ottawa.....	83	102	57	190	403	1,206	18,801 21	33,969 82	52,791 03	44 17	28 18
Presque Isle..	2	31	19	17	78	67	2,712 80	2,022 00	4,734 80	34 77	30 18
Roscommon ..	2	17	5	17	23	78	808 50	2,389 25	3,197 75	35 15	30 63
Saginaw	175	188	88	317	579	2,266	32,923 10	78,786 78	111,709 88	56 86	34 77
St. Clair.....	69	146	49	244	323	1,604	16,054 05	46,274 52	62,328 57	46 73	28 85
St. Joseph.....	60	116	75	234	373	1,152	16,971 05	30,343 25	47,314 30	45 50	26 34
Sanilac.....	28	125	81	119	618	727	22,556 78	16,704 21	39,260 99	36 49	22 98
Schoolcraft...	7	18	7	22	37	137	2,210 00	5,899 55	8,109 55	59 78	43 06
Shiawassee ...	57	114	99	214	489	999	19,490 64	28,060 72	47,551 36	39 86	28 09
Tuscola.....	41	136	72	183	449	987	17,130 73	26,074 59	43,205 32	38 13	26 42
Van Buren....	60	141	95	240	449	1,175	18,852 39	32,448 62	51,301 01	42 00	27 62
Washtenaw ..	106	160	94	292	528	1,771	23,990 60	51,480 96	80,471 56	54 90	29 07
Wayne.....	468	135	93	584	680	5,185	45,519 77	250,890 14	296,409 91	66 94	48 38
Wexford	19	65	39	95	167	456	6,840 80	14,884 83	21,725 63	40 96	32 64

RESOURCES OF SCHOOL DISTRICTS.

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TABLE VI.

Resources of School Districts, as Reported by School Inspectors for the year ending September 3, 1888.

Counties.	Moneys on hand Sept. 5, 1887.	One Mill Tax.	Primary School Interest Fund.	Library moneys.	District taxes for all purposes.	Raised from all other sources.	Total resources for the year.
Totals.....	\$921,239 09	\$658,209 20	\$680,652 38	\$32,665 02	\$3,222,663 36	\$533,277 26	\$6,112,789 39
Alcona.....	\$2,049 31	\$1,064 91	\$1,581 08	.....	\$10,525 82	\$875 73	\$16,821 80
Alger.....	1,029 12	926 55	47 16	\$48 14	2,717 77	.....	4,768 74
Allegan.....	18,987 86	12,908 96	14,464 77	505 26	44,439 58	3,760 67	91,459 84
Alpena.....	3,550 10	750 80	4,457 77	128 89	22,990 19	3,101 88	34,991 06
Antrim.....	4,734 59	2,820 68	3,231 46	105 24	23,118 89	1,331 20	35,682 67
Arenac.....	2,196 17	806 08	1,501 96	.....	9,859 06	5,387 22	19,711 54
Baraga.....	3,063 37	1,258 55	681 79	25 95	10,181 83	980 00	16,131 04
Barry.....	11,326 55	9,352 25	9,391 70	508 78	33,624 05	2,319 25	67,566 08
Bay.....	23,086 58	2,683 91	15,712 48	77 99	87,459 04	18,302 80	147,680 15
Benzie.....	1,715 84	1,174 46	1,518 85	52 80	13,570 06	718 82	18,757 83
Berrien.....	19,175 92	13,064 99	13,775 86	700 41	66,063 87	18,133 32	131,719 89
Branch.....	12,683 51	12,604 36	8,742 84	425 89	33,033 75	13,642 13	85,855 49
Calhoun.....	13,403 83	17,310 46	13,495 52	498 51	71,696 39	2,713 73	121,163 23
Cass.....	10,950 73	13,390 50	6,795 23	426 24	26,206 46	4,066 68	62,488 08
Charlevoix.....	3,586 31	2,693 40	3,125 06	112 80	19,682 96	2,031 08	30,666 68
Cheboygan.....	7,722 41	3,124 82	3,467 47	380 68	17,999 88	2,238 76	35,191 62
Chippewa.....	1,940 95	2,938 21	2,989 30	338 52	13,604 51	1,076 05	22,845 59
Clare.....	4,817 07	1,686 18	1,611 44	22 16	12,437 21	2,019 96	22,612 47
Clinton.....	12,164 56	15,743 11	9,641 76	274 08	30,323 70	2,722 59	71,775 18
Crawford.....	4,444 13	1,054 99	405 94	3 58	13,414 33	1,133 35	20,466 83
Delta.....	11,264 40	2,438 02	2,326 11	206 27	18,000 36	4,505 78	38,740 94
Eaton.....	14,688 55	15,119 78	10,928 12	127 45	40,017 49	9,616 61	92,487 92
Emmet.....	2,582 18	1,286 27	2,699 94	.....	17,839 28	1,433 56	26,954 61
Genesee.....	23,404 67	18,724 13	15,090 93	1,333 91	46,018 27	17,763 27	124,896 80
Gladwin.....	1,790 11	892 47	438 52	.....	7,591 33	567 72	11,280 65
Gogebic.....	2,000 19	4,388 26	601 26	.....	23,772 65	23,410 00	54,172 36
Grand Traverse...	6,176 57	3,174 51	3,659 63	74 62	23,957 62	1,655 87	44,732 36
Gratiot.....	10,939 66	6,920 91	9,912 97	437 59	39,652 92	4,476 87	73,025 81
Hilledale.....	13,597 04	13,730 33	10,416 44	505 39	31,314 45	7,946 00	63,616 18
Houghton.....	35,526 18	31,551 72	9,832 39	505 39	66,741 49	6,517 27	151,311 24
Huron.....	12,094 86	4,561 57	11,094 06	96 05	30,905 99	2,719 47	61,632 17

TABLE VI.—Continued.

Counties.	Moneys on hand Sept. 5, 1887.	One Mill Tax.	Primary School Interest Fund.	Library moneys.	District taxes for all purposes.	Raised from all other sources.	Total resources for the year.
Ingham	\$10,970 72	\$17,138 02	\$12,089 14	\$315 41	\$96,308 97	\$8,458 20	\$116,499 33
Ionia	12,590 59	13,988 20	11,445 54	408 11	49,431 89	2,416 14	92,631 06
Iosco	3,607 16	1,220 53	3,661 74	181 65	19,117 03	857 70	28,596 81
Iron	6,886 71	3,378 58	721 52	-----	5,476 98	1,271 28	17,684 02
Isabella	10,148 24	3,440 27	5,940 81	224 24	24,296 42	3,485 71	47,612 01
Isle Royal	-----	-----	-----	-----	-----	-----	-----
Jackson	28,182 06	22,106 61	14,187 88	378 63	59,437 09	4,590 11	131,161 55
Kalamazoo	15,846 67	20,364 05	12,367 27	2,373 38	54,129 62	14,161 45	121,302 24
Kalkaska	4,017 67	2,771 47	1,633 98	26 82	14,825 60	1,300 88	24,124 17
Kent	31,918 75	26,050 50	50,617 73	2,480 28	215,031 64	18,427 20	327,239 82
Keweenaw	3,720 21	2,626 71	1,294 62	114 52	8,914 95	508 02	12,174 08
Lake	6,237 09	1,299 57	2,155 67	-----	15,307 88	1,241 82	26,276 28
Lapeer	13,124 57	11,285 84	10,462 65	242 39	36,496 44	11,308 13	83,954 37
Leelanaw	2,263 45	950 54	2,813 42	-----	9,626 07	744 35	16,408 33
Lenawee	19,399 35	27,542 27	15,842 49	328 36	57,065 62	3,328 67	125,768 33
Livingston	11,245 46	12,781 84	6,523 39	395 40	22,346 19	7,613 76	61,738 80
Luce	890 03	1,007 33	244 77	-----	3,965 45	-----	6,127 58
Mackinac	2,350 04	758 87	1,518 86	208 89	11,520 65	4,642 08	20,999 49
Macomb	12,910 81	15,981 53	12,248 44	394 47	27,964 56	2,398 08	73,062 81
Manistee	7,376 11	4,711 26	8,467 99	807 55	41,001 84	8,177 25	70,611 34
Manitou	39 59	83 01	502 50	-----	446 64	25 27	1,047 01
Marquette	23,702 44	15,443 33	9,494 72	803 56	74,090 36	1,258 82	124,819 73
Mason	4,281 83	1,449 04	4,943 49	525 90	44,839 32	41,472 86	97,538 39
Mecosta	19,461 67	5,558 88	7,421 71	373 94	39,425 32	2,657 64	74,936 82
Menominee	15,558 39	6,938 06	7,625 56	19 96	49,453 57	4,946 87	84,582 16
Midland	6,446 97	1,773 13	3,476 88	14 35	23,348 83	15,259 68	50,408 47
Missaukee	7,664 13	2,375 71	928 28	-----	11,561 14	1,588 52	24,121 78
Monroe	19,006 38	14,870 58	13,231 37	464 07	23,472 65	6,808 21	73,827 21
Montcalm	18,945 53	7,334 38	11,443 07	304 55	45,685 77	5,086 26	89,470 44
Montmorency	2,750 29	486 41	227 78	-----	4,992 17	634 41	9,991 06
Muskegon	20,899 88	8,414 42	13,727 93	344 44	87,590 56	16,961 81	148,375 37
Nawaygo	11,225 71	3,213 09	6,068 61	12 60	30,341 80	4,873 94	56,637 74
Oakland	13,696 17	21,973 87	12,617 11	542 53	51,277 60	10,061 67	112,810 28
Oceana	7,545 75	3,830 21	5,585 27	12 00	23,437 15	1,914 26	41,990 05
Ogemaw	5,346 29	957 48	1,230 11	104 79	10,340 51	855 06	18,839 49
Ontonagon	3,761 75	1,980 23	776 86	799 01	7,635 77	923 91	15,856 53
Osceola	6,652 18	3,886 67	5,319 29	20 73	26,324 96	1,481 81	43,233 69
Oscoda	2,387 25	371 42	278 96	-----	4,237 72	599 06	7,624 43

TABLE VI.—Continued.

Counties.	Moneys on hand Sept. 5, 1887.	One Mill Tax.	Primary School Interest Fund.	Library moneys.	District taxes for all purposes.	Raised from all other sources.	Total resources for the year.
Otsego.....	\$3,776 98	\$1,317 18	\$1,496 98	\$182 33	\$11,458 00	3677 73	\$18,859 18
Ottawa.....	13,255 45	11,097 42	14,387 87	870 80	46,928 98	11,944 77	98,309 54
Presque Isle.....	1,780 12	794 53	1,522 22	-----	6,152 65	1,482 85	11,732 87
Roscommon.....	1,546 63	1,104 63	398 97	50 63	3,085 60	1,098 40	7,244 86
Saginaw.....	34,097 49	13,342 75	27,812 98	829 05	133,624 37	30,884 44	243,021 65
St. Clair.....	22,665 77	13,103 48	19,123 72	425 75	51,891 46	6,888 95	114,661 38
St. Joseph.....	9,210 81	14,677 33	8,692 17	828 65	34,420 39	6,723 91	76,353 33
Sanilac.....	12,115 32	5,525 86	13,554 60	74 56	35,167 11	4,410 72	70,989 41
Schoolcraft.....	3,280 51	2,451 33	907 01	-----	10,176 41	432 23	17,197 49
Shiawassee.....	12,094 85	9,707 98	10,333 45	368 27	53,209 91	10,739 36	97,553 26
Tuscola.....	25,489 95	7,806 62	12,112 53	85 41	42,305 60	6,058 68	94,476 41
Van Buren.....	12,351 44	11,233 87	10,140 92	347 91	46,833 69	5,547 33	87,956 60
Washtenaw.....	21,642 70	29,421 07	15,023 45	525 18	57,769 01	22,768 16	153,510 37
Wayne.....	51,781 52	19,368 57	39,152 35	7,133 41	460,614 86	39,568 02	670,272 39
Wexford.....	10,624 39	2,396 69	3,367 46	15 00	27,643 09	4,215 32	48,358 97

TABLE VII.

Expenditures of School Districts as reported by School Inspectors for the year ending September 8, 1888.

Counties.	Paid teachers.	Paid for building and repairs.	Paid for library books and care of library.	Paid on bonded indebtedness.	Paid for all other purposes.	Total expenditures for the year.	Amount on hand Sept. 8, 1888.
Totals.....	\$3,071,657 26	\$805,182 43	\$57,899 76	\$314,659 51	\$986,451 34	\$6,112,789 39	\$875,939 02
Alcona.....	\$8,894 40	\$1,627 17	-----	\$680 79	\$3,159 83	\$16,821 80	\$2,959 11
Alger.....	2,467 50	320 62	-----	-----	982 81	4,768 74	997 81
Allegan.....	58,625 93	5,836 03	\$248 64	4,688 82	12,505 07	91,459 34	15,104 85
Alpena.....	20,369 50	4,582 12	435 00	68 00	6,722 87	34,991 06	2,818 57
Antrim.....	19,718 09	1,068 55	66 00	2,647 20	6,288 57	35,682 67	5,874 26
Arenac.....	7,904 50	3,188 76	-----	520 22	5,908 27	19,711 54	2,194 79
Baraga.....	7,163 50	1,272 24	211 25	1,802 00	2,914 61	16,131 04	3,267 44
Barry.....	37,259 19	4,741 25	879 30	8,191 76	8,625 66	67,566 03	8,368 87
Bay.....	67,263 05	26,718 18	184 76	2,330 85	30,694 13	147,660 15	20,469 18
Benzie.....	11,383 98	1,586 23	35 00	871 26	3,838 83	18,757 63	1,042 03
Berrien.....	64,553 84	20,977 17	855 95	10,365 44	18,078 08	131,719 89	17,889 41
Branch.....	42,706 65	14,536 44	836 34	5,323 31	12,289 06	85,355 49	9,664 69
Calhoun.....	68,496 92	6,806 54	1,143 63	14,900 07	17,329 80	121,163 23	12,484 27
Cass.....	37,273 83	2,451 12	73 41	8,431 22	8,755 93	62,438 03	10,454 02
Charlevoix.....	16,226 61	2,577 88	35 00	1,900 17	5,681 13	30,666 63	4,245 89
Cheboygan.....	15,995 90	3,854 05	172 34	4,063 06	4,367 59	35,191 62	6,738 68
Chippewa.....	12,610 91	3,953 64	-----	844 10	3,840 91	22,845 59	2,096 03
Clare.....	10,987 13	3,749 22	-----	480 41	3,929 11	23,612 47	3,516 60
Clinton.....	41,650 67	2,519 47	73 91	5,557 69	9,196 55	71,775 18	12,774 89
Crawford.....	8,000 10	1,883 82	-----	1,181 23	3,441 50	20,466 83	5,901 19
Delta.....	15,109 00	5,210 19	23 75	736 30	14,243 80	38,740 94	3,417 90
Eaton.....	49,611 78	4,689 60	172 47	11,253 38	14,679 72	92,487 92	12,080 97
Emmet.....	14,854 80	1,547 83	2 00	1,608 19	4,025 14	26,954 61	3,922 15
Genesee.....	67,123 73	11,895 97	951 14	11,985 50	21,331 51	124,896 80	11,603 95
Gladwin.....	4,873 50	1,596 94	35 90	415 72	2,722 25	11,280 65	1,636 34
Gogebie.....	11,550 00	28,902 88	-----	566 65	8,013 55	54,172 36	7,139 23
Grand Traverse.....	23,921 93	2,910 78	380 00	5,097 94	8,420 45	44,732 36	4,002 21
Gratiot.....	38,511 45	4,134 99	340 00	6,397 29	10,542 55	73,025 81	13,099 53
Hillsdale.....	47,539 58	10,176 86	101 46	3,616 97	12,634 75	88,616 18	9,546 56
Houghton.....	62,132 27	5,679 68	495 12	1,313 75	23,774 96	151,311 24	47,915 46

EXPENDITURES OF SCHOOL DISTRICTS.

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TABLE VII.—Continued.

Counties.	Paid teachers.	Paid for building and repairs.	Paid for library books and care of library.	Paid on bonded indebtedness.	Paid for all other purposes.	Total expenditures for the year.	Amount on hand Sept. 8, 1888.
Huron.....	\$34,877 83	\$2,919 18	\$45 50	\$4,204 75	\$9,151 55	\$61,632 17	\$10,433 86
Ingham.....	56,578 55	13,926 53	775 10	6,561 89	20,783 74	116,499 33	17,923 53
Ionia.....	54,044 17	3,039 90	547 75	6,889 95	14,167 23	92,631 08	13,942 08
Iosco.....	14,899 22	4,233 28	146 62	1,901 58	4,392 66	28,593 81	3,022 45
Iron.....	6,707 50	1,379 55	100 00	540 90	2,465 61	17,684 02	5,991 36
Isabella.....	26,513 10	4,639 32	60 50	1,681 24	5,876 00	47,612 01	8,841 85
Isle Royal.....							
Jackson.....	74,105 58	15,704 11	127 45	3,168 22	23,054 98	131,161 55	15,001 26
Kalamazoo.....	63,021 85	20,114 64	2,214 86	3,103 53	15,487 23	121,303 24	17,410 13
Kalkaska.....	11,755 52	1,497 46	115 98	725 81	5,042 80	24,124 17	4,966 60
Kent.....	172,436 60	39,290 33	8,458 54	19,980 86	58,096 40	327,239 82	23,975 09
Keweenaw.....	5,495 75	128 20	10 00		1,307 84	12,174 03	5,232 24
Lake.....	13,767 60	1,261 79	25 00	1,427 74	3,507 08	23,276 28	6,287 07
Lapeer.....	45,983 06	9,257 78	93 80	5,009 12	10,245 88	83,954 87	13,365 73
Leelanaw.....	10,539 82	686 51		1,146 54	1,470 23	16,408 33	2,565 23
Leonia.....	75,966 32	5,423 23	906 90	6,653 01	17,870 94	125,768 33	19,543 33
Livingston.....	33,474 25	7,194 53	20 50	3,004 90	8,690 36	61,788 80	9,354 26
Luce.....	2,837 00	484 74		350 00	1,173 25	6,137 58	1,283 59
Mackinac.....	9,469 85	4,494 35	46 00	1,146 91	2,605 51	20,999 49	3,236 87
Macomb.....	41,206 02	3,638 84	233 69	6,748 17	8,607 95	73,082 81	12,596 14
Manistee.....	33,158 77	4,223 27	42 88	5,621 11	20,663 97	70,611 34	6,902 84
Manitou.....	755 00	89 10			188 35	1,047 01	64 56
Marquette.....	57,107 40	10,986 49	838 85	2,023 54	31,976 59	124,819 73	21,886 86
Mason.....	26,796 77	20,025 94	236 40	4,623 11	27,449 01	97,588 39	18,403 16
Macosta.....	34,608 24	3,889 19	324 62	7,340 19	8,946 36	74,966 33	19,828 22
Menominee.....	38,596 68	5,164 61	379 30	9,937 82	13,261 04	84,532 16	17,243 71
Midland.....	18,018 09	15,206 01	43 00	1,277 57	7,524 54	50,408 47	8,845 26
Missaukee.....	9,713 73	1,538 09	51 33	582 22	3,373 57	24,121 78	3,863 79
Monroe.....	37,516 34	13,576 20	411 95	8,409 20	9,256 63	73,827 31	9,656 39
Montcalm.....	50,314 67	5,536 43	287 73	2,772 56	11,446 58	89,470 44	19,112 47
Montmorency.....	4,147 30	320 02		668 26	1,677 27	9,091 06	2,278 21
Muskegon.....	71,183 40	34,158 81	1,391 72	8,378 11	23,226 51	148,375 37	10,086 83
Newaygo.....	27,920 05	4,576 32	15 00	3,222 07	8,363 64	55,837 74	11,240 16
Oakland.....	66,069 05	13,008 37	452 40	4,751 48	15,875 59	112,810 23	12,653 33
Oceana.....	22,337 45	4,082 65	34 00	854 66	4,990 77	41,990 05	9,220 52
Ogemaw.....	8,396 33	2,226 95		725 22	3,340 12	18,839 49	3,650 87
Ontonagon.....	9,377 50	446 95	100 00		2,451 61	15,866 53	3,480 47
Oscoda.....	24,362 27	1,597 11	68 55	3,654 23	5,988 04	43,288 69	7,068 43

SUPERINTENDENT'S REPORT.

TABLE VII.—*Continued.*

Counties.	Paid teachers.	Paid for building and repairs.	Paid for library books and care of library.	Paid on bonded indebtedness.	Paid for all other purposes.	Total expenditures for the year.	Amount on hand Sept. 3, 1888.
Oscoda	\$3,681 17	\$1,086 88	-----	\$152 70	\$1,215 70	\$7,824 43	\$1,738 48
Otsego	9,320 25	1,087 69	\$5 25	1,540 91	2,919 45	12,859 18	4,135 63
Ottawa	52,746 03	12,980 27	475 96	4,369 87	15,788 24	98,909 54	11,999 17
Presque Isle.....	4,871 20	1,715 20	105 08	1,199 47	2,220 27	11,732 87	1,611 15
Roscommon	8,151 25	998 24	-----	273 69	871 60	7,244 86	1,950 08
Saginaw	117,291 89	88,929 54	1,741 05	9,846 96	40,784 81	242,021 65	33,427 40
St. Clair	62,470 28	8,222 78	289 55	8,991 97	21,517 73	114,661 38	23,169 07
St. Joseph	46,861 08	5,230 08	863 04	2,822 96	11,789 95	76,353 38	8,786 32
Sanilac	39,378 24	8,843 05	20 70	5,925 16	9,583 98	70,989 41	12,238 28
Schoolcraft	8,109 55	8,996 89	71 00	670 41	2,298 28	17,197 49	2,051 86
Shiawassee	47,641 95	13,143 95	110 95	7,833 87	12,886 48	97,558 26	16,941 56
Tuscola	43,059 07	17,141 91	127 47	4,491 85	14,745 52	94,476 41	14,911 09
Van Buren	51,883 78	6,801 25	135 74	7,004 76	11,828 19	87,956 09	11,852 83
Washtenaw	80,482 13	17,173 70	986 81	4,675 69	19,941 22	153,510 37	30,300 82
Wayne	296,359 91	205,059 65	27,423 95	6,721 23	98,747 28	670,272 89	35,950 82
Wexford	21,756 18	4,393 45	177 37	2,265 02	7,547 25	48,358 97	12,220 75

TABLE VIII.

Miscellaneous Financial Statistics as Reported by School Inspectors for the year ending September 3, 1888.

Counties.	Bonded indebtedness of the districts.	Total indebtedness of the districts.	Amount due the districts.	Amount received by the districts for non-resi- dent tuition.	Amount paid and due in- spectors and members of school boards for services.	Amount paid and due town- ship chairmen and officers for services.
Totals.....	\$1,570,862 06	\$1,746,995 48	\$187,716 18	\$54,088 00	\$15,406 31	\$28,072 46
Alcona.....	\$2,567 88	\$3,563 73	826 00	\$125 00	\$122 00	\$27 50
Alger.....	400 00	540 23	629 45	-----	28 25	12 00
Allegan.....	6,892 58	7,479 77	1,296 47	1,447 74	222 63	121 75
Alpena.....	650 00	1,215 95	808 10	11 43	319 00	196 50
Antrim.....	21,604 50	22,207 41	1,709 78	40 66	140 13	108 00
Arenac.....	4,785 00	6,664 18	1,214 53	11 10	83 22	91 33
Baraga.....	232 00	232 00	178 49	-----	19 00	6 00
Barry.....	14,829 74	17,141 13	1,303 45	848 50	184 69	149 81
Bay.....	30,194 20	42,927 70	569 12	887 35	235 60	234 05
Benzie.....	2,773 00	3,863 02	1,424 74	12 00	77 40	39 00
Berrien.....	25,908 00	26,723 95	2,406 74	805 52	295 55	177 26
Branch.....	12,256 32	12,752 43	1,838 13	1,223 01	142 97	253 75
Calhoun.....	40,000 00	40,337 11	1,050 47	2,044 79	162 43	401 93
Cass.....	3,829 68	4,512 33	655 88	602 19	158 75	161 46
Charlevoix.....	12,760 00	14,265 71	1,425 61	85 10	191 25	93 40
Cheboygan.....	4,983 00	6,078 09	1,600 06	197 60	221 40	104 70
Chippewa.....	8,107 00	9,012 04	197 38	2 75	110 75	91 50
Clare.....	4,916 90	5,498 54	3,099 07	18 50	184 89	81 49
Clinton.....	23,965 00	24,448 55	2,981 20	905 38	178 25	76 91
Crawford.....	2,685 00	3,185 64	4,888 61	10 51	136 08	81 66
Delta.....	27,053 85	30,968 62	4,445 30	-----	100 90	203 70
Eaton.....	17,565 10	21,398 44	836 38	1,989 92	284 40	134 15
Emmet.....	10,073 00	12,574 10	1,665 78	118 43	167 45	49 79
Genesee.....	100,192 50	100,739 68	682 84	2,062 62	626 50	471 50
Gladwin.....	4,780 00	6,170 51	3,463 59	-----	183 75	45 25
Gogebic.....	28,400 00	28,727 00	264 66	-----	85 50	34 00
Grand Traverse.....	22,898 00	23,523 16	2,029 25	1,088 54	222 29	56 72
Gratiot.....	53,500 13	58,712 56	1,802 59	634 89	237 95	89 25
Hilldale.....	11,563 50	15,316 63	714 28	1,146 54	177 60	243 85
Houghton.....	16,500 00	20,015 00	811 42	586 80	112 00	129 50

SUPERINTENDENT'S REPORT.

TABLE VIII.—Continued.

Counties.	Bonded indebtedness of the districts.	Total indebtedness of the districts.	Amount due the districts.	Amount received by the districts for non-resident tuition.	Amount paid and due inspectors and members of school boards for services.	Amount paid and due township chairmen and officers for services.
Huron	\$15,008 00	\$16,214 15	\$1,190 53	\$160 17	\$256 86	\$201 96.
Ingham.....	16,102 98	64,870 97	2,571 09	1,278 87	154 90	124 82
Ionia	8,401 67	12,120 78	765 45	2,405 61	148 45	99 50
Iosco.....	2,500 00	5,903 40	2,156 03	.....	99 00	80 42.
Iron	9,451 59	9,621 59	988 91	.....	268 00	100 00.
Isabella.....	17,831 85	18,976 08	4,402 72	76 32	210 29	136 75
Isle Royal.....	.....	.....	.....	.....	.....	.....
Jackson.....	15,965 00	16,773 22	1,336 82	2,334 17	170 75	145 35.
Kalamazoo	18,500 00	20,005 97	634 39	2,159 80	188 85	376 85.
Kalkaska	7,500 00	8,470 19	1,200 03	49 75	151 04	85 57
Kent	234,248 50	236,946 58	1,899 88	2,713 72	222 92	776 70.
Keweenaw.....	.....	202 84	687 02	.....	54 00	.....
Lake.....	2,700 00	3,782 10	1,523 64	34 75	181 28	82 35.
Lapeer	28,856 92	31,151 53	1,066 42	1,034 35	237 28	137 46
Leelanaw	1,485 00	1,953 02	1,478 50	11 50	132 06	69 81.
Lenawee.....	7,586 95	8,366 01	1,899 97	2,286 57	375 80	413 49.
Livingston.....	18,950 00	15,667 42	810 30	883 76	114 25	118 96
Luce	3,000 00	3,065 00	64 87	.....	83 14	21 14.
Mackinac.....	18,977 00	14,695 15	5,226 63	5 60	117 38	112 50.
Macomb	7,215 00	7,759 72	71 64	1,219 97	162 10	84 69
Manistee	33,685 00	35,052 28	896 27	69 34	97 50	71 15.
Manitou .....	.....	850 00	1,094 29	.....	42 00	60 00
Marquette	102,800 00	103,231 95	1,917 66	26 50	225 00	1,060 00
Mason.....	58,832 33	58,917 01	1,304 78	25 95	145 91	305 66
Mecosta	9,454 00	10,949 86	1,794 30	87 66	221 59	425 42.
Menominee.....	17,615 00	19,796 10	2,025 39	44 75	216 00	496 64
Midland	4,860 00	6,184 08	4,423 68	88 63	153 00	81 75.
Missaukee	2,795 50	4,794 54	1,538 14	9 00	133 50	76 66.
Monroe	22,693 52	24,971 90	706 53	976 95	238 76	202 13.
Montcalm.....	6,296 50	7,586 72	5,715 01	720 88	222 35	181 35.
Montmorency.....	725 00	1,845 84	4,120 15	.....	118 96	56 00.
Muskegon	27,608 92	28,865 47	2,951 48	436 33	216 65	406 90.
Newaygo.....	5,398 60	7,344 84	2,633 79	101 99	343 95	199 86.
Oakland	28,036 10	29,769 11	917 67	2,701 27	289 72	180 63
Oceana.....	4,078 29	4,718 76	1,582 53	165 41	204 20	97 66.
Ogemaw.....	6,100 00	7,206 20	2,341 77	5 25	207 75	70 79
Ontonagon.....	375 00	525 40	945 00	85 00	23 50

MISCELLANEOUS FINANCIAL STATISTICS.

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TABLE VIII.—Continued.

Counties.	Bonded indebtedness of the districts.	Total indebtedness of the districts.	Amount due the districts.	Amount received by the districts for non-resident tuition.	Amount paid and due inspectors and members of school boards for services.	Amount paid and due township chairmen and officers for services.
Oceola	\$7,558 99	\$7,993 91	\$1,842 73	\$108 05	\$247 80	\$105 57
Oscoda.....	1,100 00	2,053 87	1,347 76	-----	64 25	23 75
Otsego	1,400 00	1,733 57	320 73	-----	122 60	47 01
Ottawa.....	22,811 94	23,661 13	1,899 46	324 27	204 10	415 22
Presque Isle.....	5,000 00	10,608 45	5,394 29	-----	122 25	111 67
Rosecommon	300 00	526 50	238 48	10 00	81 50	25 50
Saginaw	36,498 00	42,384 28	3,775 35	830 62	470 54	578 80
St. Clair	32,090 00	36,642 71	1,174 49	532 25	260 60	120 25
St. Joseph.....	6,814 87	8,407 79	421 08	1,801 12	144 25	183 00
Sanilac.....	18,599 17	21,057 69	1,646 88	141 24	280 25	188 40
Schoolcraft.....	600 00	965 98	83 61	-----	100 00	59 50
Shiawassee	16,813 40	18,051 75	1,409 86	1,104 44	206 57	384 96
Tuscola.....	45 975 00	48,080 13	1,827 69	617 59	233 75	160 82
Van Buren.....	7,486 80	8,097 57	2,059 69	1,500 84	255 15	114 65
Washtenaw	47,301 86	48,446 87	717 49	6,360 80	370 50	629 25
Wayne.....	29,575 00	30,902 03	793 32	2,254 16	361 50	8,626 25
Wexford.....	18,364 47	19,585 26	819 72	97 02	233 91	285 23

TABLE IX.

Cost per Capita of Public Schools of the State for the School year ending September 3, 1888.

Counties.	No. of scholars included in school census in—		No. pupils enrolled in—		Cost per capita for instruction, based on school census in—			Cost per capita for instruction, based on enrollment in—			Total expenses per capita during year, based upon enrollment in—		
	Graded school districts.	Ungraded school districts.	Graded school districts.	Ungraded school districts.	Graded school districts.	Ungraded school districts.	All the districts.	Graded school districts.	Ungraded school districts.	All the districts.	Graded school districts.	Ungraded school districts.	All the districts.
Totals.....	818,844	311,074	193,907	236,811	\$5 80	\$4 41	\$4 86	\$8 50	\$6 08	\$7 20	\$16 87	\$8 75	\$12 32
Acona.....	307	1,186	239	779	\$5 15	\$5 96	\$5 86	\$7 03	\$8 62	\$8 25	\$10 63	\$14 53	\$13 62
Alger.....	.....	197	.....	167	.....	13 54	13 54	.....	15 97	15 97	.....	22 58	22 58
Allegan.....	3,532	9,048	2,948	7,014	5 48	3 80	4 27	6 57	4 90	5 39	9 62	6 84	7 66
Alpena.....	2,578	1,064	1,829	612	4 06	5 53	4 40	7 95	9 61	8 87	12 46	15 85	13 18
Antrim.....	979	2,067	887	1,638	7 23	6 04	6 45	8 09	7 72	7 85	13 11	11 13	11 83
Arenac.....	538	1,062	348	789	3 77	5 58	4 98	5 83	7 65	7 09	23 11	12 45	15 41
Baraga.....	579	255	401	158	8 66	8 43	8 59	13 50	13 60	12 81	21 22	27 56	23 01
Barry.....	1,649	6,076	1,503	4,997	6 20	4 47	4 84	6 81	5 43	5 75	14 33	7 54	9 17
Bay.....	12,595	3,894	7,447	2,062	4 29	3 40	4 08	7 25	6 86	7 06	14 36	9 73	13 35
Benzie.....	589	1,054	474	913	7 18	6 80	6 94	8 92	7 85	8 22	13 46	12 41	12 77
Berrien.....	5,538	6,793	4,182	5,186	6 08	4 52	5 22	8 13	5 90	6 90	16 97	8 35	12 19
Branch.....	2,565	5,065	2,244	4,117	7 95	4 89	5 59	9 09	5 40	6 70	20 83	7 30	11 90
Calhoun.....	6,404	5,760	4,408	4,602	5 81	5 45	5 64	8 45	6 82	7 62	15 77	8 53	12 07
Cass.....	1,521	4,560	1,389	3,625	7 67	5 62	6 13	8 40	7 07	7 43	12 73	9 46	10 37
Charlevoix.....	674	2,394	553	1,770	5 80	5 25	5 37	7 07	7 09	7 09	11 60	11 30	11 37
Cheboygan.....	1,642	1,838	991	1,198	4 23	4 96	4 63	7 06	7 61	7 36	10 26	15 27	13 00
Chippewa.....	1,548	1,613	905	1,120	3 44	4 62	4 04	5 89	6 65	6 31	11 78	9 01	10 24
Clare.....	589	1,105	691	827	5 08	5 91	5 54	6 53	7 89	7 27	9 53	15 13	12 58
Clinton.....	2,090	6,367	1,913	4,493	6 91	4 25	4 92	7 55	6 04	6 49	11 61	8 19	9 21
Crawford.....	235	427	200	333	7 37	13 84	11 25	10 50	17 75	15 08	22 32	30 33	27 33
Delta.....	2,273	1,563	1,006	942	3 38	4 79	3 96	7 01	7 95	7 45	20 17	14 08	17 33
Eaton.....	3,473	6,176	3,095	4,953	6 53	4 33	5 13	7 39	5 39	6 16	14 63	7 10	9 99
Emmet.....	1,621	1,407	908	995	6 35	5 94	6 11	7 17	8 40	7 82	9 74	13 30	11 61
Genesee.....	4,387	7,373	3,345	5,512	6 64	4 11	5 05	8 71	5 50	6 71	20 61	8 05	12 79
Gladwin.....	.....	745	.....	554	.....	6 95	6 95	.....	9 35	9 35	.....	17 41	17 41
Gogebic.....	1,535	318	1,065	210	5 60	9 25	6 23	8 31	14 00	9 27	32 68	62 39	37 78
Gd. Traverse ..	1,439	2,371	1,200	1,802	7 78	5 88	6 29	9 33	7 08	7 98	18 71	10 14	13 57
Gratiot.....	2,543	6,690	2,230	5,146	5 67	3 74	4 16	6 48	4 66	5 21	11 61	6 61	8 12

COST PER CAPITA OF PUBLIC SCHOOLS.

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TABLE IX.—Continued.

Counties.	No. of scholars included in school census in—		No. pupils enrolled in—		Cost per capita for instruction, based on school census in—			Cost per capita for instruction, based on enrollment in—			Total expenses per capita during year, based upon enrollment in—		
	Graded school districts.	Ungraded school districts.	Graded school districts.	Ungraded school districts.	Graded school districts.	Ungraded school districts.	All the districts.	Graded school districts.	Ungraded school districts.	All the districts.	Graded school districts.	Ungraded school districts.	All the districts.
Hilledale.....	2,700	6,168	2,276	5,108	\$6 86	\$4 54	\$5 24	\$8 14	\$5 48	\$6 80	\$14 60	\$7 99	\$10 08
Houghton.....	9,947	856	6,012	494	5 67	4 43	5 68	9 70	7 67	9 55	15 69	18 32	15 89
Huron.....	2,680	7,801	1,750	4,653	4 35	2 98	3 83	6 66	4 99	5 45	8 90	7 66	8 00
Ingham.....	5,206	5,518	3,961	4,395	6 11	4 49	5 28	8 04	5 63	6 77	15 33	8 61	11 80
Ionia.....	3,208	6,397	2,764	4,924	8 00	4 43	5 62	9 39	5 75	7 08	15 59	7 23	10 24
Iosco.....	3,118	803	1,915	539	3 58	5 11	3 89	5 82	7 61	6 22	10 05	11 74	10 42
Iron.....	660	209	551	163	7 08	9 57	7 64	8 42	12 27	9 30	18 53	26 01	16 38
Isabella.....	1,108	4,945	790	3,662	5 08	4 21	4 37	7 12	5 68	5 94	10 41	8 34	8 71
Isle Royal.....													
Jackson.....	6,666	5,927	4,806	4,583	6 73	4 94	5 89	9 34	6 39	7 90	16 52	8 02	12 37
Kalamazoo.....	6,214	4,850	4,158	3,740	5 86	5 48	5 69	8 75	7 11	7 98	16 91	8 96	13 15
Kalkaska.....	350	1,220	271	1,021	6 08	8 02	7 57	7 79	9 58	9 20	14 27	14 96	14 81
Kent.....	19,702	9,533	12,499	7,076	6 61	4 45	5 90	10 42	5 99	8 32	19 02	8 56	15 24
Keweenaw.....	641	350	313	217	3 71	3 91	5 55	7 48	14 37	10 27	9 78	17 66	12 98
Lake.....	1,050	1,011	877	806	5 80	7 64	6 70	6 95	9 58	8 21	9 19	14 80	11 88
Lapeer.....	3,088	6,969	2,244	5,288	6 16	3 83	4 57	8 48	5 13	6 13	15 63	6 73	9 37
Leelanaw.....	339	2,263	223	1,534	4 37	3 92	3 99	7 46	5 73	6 00	9 39	7 63	7 86
Lenawee.....	5,390	8,482	4,133	6,601	6 79	4 57	5 43	8 35	5 87	7 02	12 93	8 00	9 90
Livingston.....	1,446	4,735	1,444	3,932	7 34	4 76	5 36	7 35	5 77	6 19	16 23	7 31	9 71
Luce.....	246	143	151	99	6 71	7 93	7 17	10 93	11 87	11 30	18 32	20 24	19 38
Mackinac.....	1,111	814	633	575	4 39	5 77	4 98	7 14	8 18	7 62	15 47	12 51	14 12
Macomb.....	3,684	6,980	2,433	3,905	4 89	3 30	3 35	7 41	6 06	6 58	12 44	7 94	9 70
Manistee.....	4,981	2,064	2,812	1,517	4 72	4 62	4 69	8 36	6 35	7 66	17 04	10 41	14 72
Manitou.....	159	276	56	187	1 38	3 19	1 90	3 93	3 24	3 40	4 03	4 03	4 04
Marquette.....	9,199	1,176	5,662	714	5 16	8 13	5 50	8 39	13 48	8 96	15 47	21 45	16 14
Mason.....	2,179	2,527	1,702	1,865	6 01	5 41	5 69	7 70	7 33	7 51	31 34	13 75	22 19
Mecosta.....	2,333	4,597	1,366	3,275	6 19	4 45	5 05	7 76	6 13	6 72	13 21	9 30	10 73
Menominee.....	4,937	1,970	3,318	1,256	5 72	5 14	5 56	8 52	8 05	8 39	15 27	13 27	14 72
Midland.....	1,025	2,371	853	1,680	6 41	4 81	5 29	7 71	6 79	7 10	27 02	11 31	16 61
Missaukee.....		1,117		869		8 78	8 78		11 28	11 28		17 56	17 56
Monroe.....	3,094	8,426	1,456	5,888	3 40	3 21	3 26	7 23	4 60	5 12	23 13	6 03	9 42
Montcalm.....	3,689	6,967	3,141	5,092	6 59	3 73	4 72	7 74	5 11	6 12	10 63	7 23	8 55
Montmorency.....		371		233		10 91	10 91		14 31	14 31		24 07	24 07
Muskegon.....	9,767	3,679	6,606	2,623	5 67	4 30	5 30	8 33	6 03	7 71	17 57	8 49	14 96
Newaygo.....	1,397	4,721	993	3,656	4 76	4 59	4 63	6 70	5 92	6 09	10 32	9 39	9 59
Oakland.....	4,186	6,396	3,625	5,375	7 27	5 16	5 96	8 39	6 62	7 33	14 06	9 13	11 13

SUPERINTENDENT'S REPORT.

TABLE IX.—Continued.

Counties.	No. of scholars included in school census in—		No. pupils enrolled in—		Cost per capita for instruction, based on school census in—			Cost per capita for instruction, based on enrollment in—			Total expenses per capita during year, based upon enrollment in—		
	Graded school districts.	Ungraded school districts.	Graded school districts.	Ungraded school districts.	Graded school districts.	Ungraded school districts.	All the districts.	Graded school districts.	Ungraded school districts.	All the districts.	Graded school districts.	Ungraded school districts.	All the districts.
Oceana.....	1,069	8,857	770	2,909	\$5 11	\$4 48	\$4 62	\$7 22	\$5 95	\$6 21	\$11 79	\$8 14	\$8 91
Ogemaw.....	826	1,001	261	802	8 98	7 44	6 59	4 97	9 28	8 22	16 18	13 67	14 29
Ontonagon.....	691	147	475	92	9 91	17 20	11 19	14 42	27 47	16 54	18 82	37 33	21 88
Osceola.....	1,644	8,338	1,418	2,394	5 89	4 80	5 00	6 24	6 70	6 53	8 88	9 85	9 49
Oscoda.....	-----	429	-----	408	-----	8 98	8 98	-----	9 56	9 56	-----	15 10	15 10
Otsego.....	193	1,111	180	865	5 60	7 37	7 11	6 00	9 47	8 87	9 29	15 09	14 09
Ottawa.....	6,103	6,404	4,680	4,475	4 94	3 54	4 22	6 44	5 06	5 77	11 71	7 04	9 43
Presque Isle....	218	1,342	155	651	3 99	2 88	3 04	5 61	5 94	5 87	13 19	12 41	12 56
Roscommon....	188	307	124	182	5 54	7 92	7 19	6 17	13 87	10 45	8 20	23 50	17 30
Saginaw.....	17,019	9,311	9,257	5,809	4 62	3 55	4 24	8 49	5 70	7 41	17 74	7 63	13 85
St. Clair.....	7,392	9,719	4,793	6,494	4 32	3 13	3 64	6 63	4 68	5 52	10 47	6 36	8 11
St. Joseph.....	2,923	4,412	2,469	3,403	8 45	5 12	6 45	10 01	6 64	8 06	15 37	8 70	11 51
Sanilac.....	2,370	9,474	1,792	6,733	4 04	3 13	3 31	5 34	4 41	4 61	8 97	6 34	6 89
Schoolcraft....	516	478	488	835	7 56	8 81	8 16	7 99	12 57	9 85	17 01	20 43	18 40
Shiawassee.....	3,218	5,814	2,796	4,405	7 32	4 13	5 26	8 42	5 45	6 60	16 69	7 71	11 20
Tuscola.....	2,696	8,123	2,142	5,691	5 53	3 48	3 99	6 96	4 97	5 52	17 18	7 51	10 16
Van Buren.....	3,239	6,117	2,873	4,819	6 97	4 69	5 48	7 86	5 96	6 67	12 83	8 13	9 89
Washtenaw....	6,585	6,466	4,350	4,609	7 51	4 80	6 17	11 37	6 73	8 96	18 79	9 00	13 75
Wayne.....	71,323	9,882	25,881	5,831	3 34	3 22	3 65	10 22	5 46	9 35	22 60	8 47	20 00
Wexford.....	1,468	1,757	1,193	1,352	5 78	7 49	6 74	7 19	9 73	8 54	13 80	14 56	14 20

STATISTICS OF TOWNSHIP LIBRARIES.

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TABLE X.

Statistics of Township Libraries as reported by School Inspectors for the year ending September 3, 1888.

Counties.	No. of townships using library mon- eys for general school purposes.	No. of townships forfeiting library moneys.	No. of townships maintaining libra- ries.	No. of volumes add- ed to township li- braries during year.	Whole No. of vol- umes in township libraries.	Amount paid for books and care of township libraries.	Amount of taxes voted for town- ship libraries.	Amount of fines, etc., received from county treasurers for township li- braries.
Totals.....	477	244	519	10,845	129,644	\$16,016 44	\$3,662 82	\$23,123 63:
Alcona.....	3	4	1	.....	250	\$50 00	.....	\$30 75
Alger.....	1	2	2	.....	383	25 00	.....	.....
Allegan.....	12	3	10	312	2,757	482 22	\$152 06	307 51
Alpena.....	2	2	3	12	359	.....	.....	14 80
Antrim.....	2	1	12	198	2,143	371 80	25 00	108 96.
Arenac.....	3	7	1	.....	77	.....	.....	.....
Baraga.....	1	3	0	.....	.....	.....	.....	.....
Barry.....	10	3	3	41	1,183	39 77	.....	387 70.
Bay.....	3	1	10	392	2,885	440 08	50 00	303 75.
Benzie.....	3	1	11	64	1,586	123 68	50 00	12 85
Berrien.....	10	2	9	527	4,158	723 64	325 00	500 48.
Branch.....	11	2	4	88	1,535	231 67	.....	152 09.
Calhoun.....	14	4	3	71	990	85 75	.....	219 50
Cass.....	10	1	5	123	2,064	107 08	.....	60 35.
Charlevoix.....	2	7	8	250	1,654	245 51	205 00	30 36.
Cheboygan.....	3	1	6	82	315	167 18	.....	124 27
Chippewa.....	2	2	4	165	399	60 00	.....	124 34
Clare.....	2	3	7	.....	696	63 75	.....	96 80
Clinton.....	12	2	3	8	618	15 68	.....	44 08
Crawford.....	2	1	6	135	1,383	277 50	100 00	13 46
Delta.....	4	4	4	45	266	75 00	.....	206 27
Eaton.....	5	5	7	138	3,074	297 34	50 00	261 02
Emmet.....	.....	4	8	107	1,116	143 85	225 00	.....
Genesee.....	14	3	1	36	562	38 71	.....	360 94
Gladwin.....	1	4	3	.....	301	40 87	28 70	.....
Gogebic.....	3	2	.....	.....	.....	.....	.....	.....
Grand Traverse.....	1	0	13	606	3,779	846 60	53 05	.....
Gratiot.....	11	5	2	.....	4	.....	50 00	50 41
Hilledale.....	17	.....	2	9	400	29 05	.....	120 43
Houghton.....	3	4	3	172	2,324	445 18	40 00	630 00

SUPERINTENDENT'S REPORT.

TABLE X.—Continued.

Counties.	No. of townships using library money for general school purposes.	No. of townships forfeiting library money.	No. of townships maintaining libraries.	No. of volumes added to township libraries during year.	Whole No. of volumes in township libraries.	Amount paid for books and care of township libraries.	Amount of taxes voted for township libraries.	Amount of fines, etc., received from county treasurers for township libraries.
Huron.....	11	5	12	77	1,569	\$167 22	.....	\$107 28
Ingham.....	12	4	1	50	611	.....	.....	98 00
Ionia.....	11	5	1	10	180	.....	.....	61 45
Iosco.....	2	3	6	116	1,477	221 54	\$25 00	152 43
Iron.....	1	5	.....	.....	.....	.....	.....	.....
Isabella.....	6	1	10	240	1,103	212 85	.....	163 92
Isle Royal.....	.....	.....	.....	.....	.....	.....	.....	.....
Jackson.....	18	5	2	30	790	18 57	.....	108 81
Kalamazoo.....	11	1	4	89	1,216	154 93	.....	1,116 15
Kalkaska.....	4	3	5	.....	311	19 50	15 00	.....
Kent.....	14	2	10	197	2,585	348 35	75 00	2,408 81
Keweenaw.....	1	3	3	.....	1,393	25 00	.....	27 29
Lake.....	3	.....	11	109	1,621	322 02	.....	.....
Lapeer.....	11	1	7	113	1,064	99 73	.....	68 98
Leelanaw.....	.....	.....	11	4	1,798	102 50	.....	.....
Lenawee.....	10	4	9	124	6,129	184 61	.....	92 36
Livingston.....	11	2	5	44	1,317	73 28	.....	86 28
Luce.....	1	2	.....	.....	.....	.....	.....	.....
Mackinac.....	2	3	5	47	900	98 11	.....	345 88
Macomb.....	4	5	6	232	1,430	203 83	.....	35 46
Manistee.....	1	3	8	110	1,822	183 62	.....	952 06
Manitou.....	3	1	1	1	53	5 00	.....	.....
Marquette.....	4	3	8	94	1,917	446 91	.....	2,048 37
Mason.....	4	.....	11	186	2,738	312 88	25 63	300 23
Meosota.....	7	.....	9	374	1,691	388 34	163 60	424 80
Menominee.....	2	2	5	545	3,831	602 44	450 00	234 69
Midland.....	2	7	6	.....	460	26 50	.....	.....
Missaukee.....	1	3	9	15	863	114 25	.....	.....
Monroe.....	4	1	11	196	2,692	199 14	10 00	226 85
Montcalm.....	5	5	12	89	2,064	186 90	.....	133 77
Montmorency.....	1	3	2	51	230	62 60	100 00	.....
Muskegon.....	3	1	15	216	3,954	529 30	200 00	520 39
Newaygo.....	3	5	15	179	2,538	127 54	25 00	163 70
Oakland.....	19	2	5	325	2,293	277 53	.....	234 00
Oceana.....	1	.....	16	396	3,709	440 73	175 00	103 24
Ogemaw.....	6	6	6	75	986	816 15	25 00	481 80
Ontonagon.....	1	4	.....	.....	.....	.....	.....	.....

TABLE X.—Continued.

Counties.	No. of townships using library mon- eys for general school purposes.	No. of townships forfeiting library moneys.	No. of townships maintaining libra- ries.	No. of volumes add- ed to township li- braries during year.	Whole No. of vol- umes in township libraries.	Amount paid for books and care of township libraries.	Amount of taxes voted for town- ship libraries.	Amount of fines, etc., received from county treasurers for township li- braries.
Osceola	4	2	11	207	1,978	\$370 75	-----	\$99 20
Oscoda	4	4	1	1	372	40 76	\$50 00	-----
Otsego	5	-----	7	4	1,659	224 25	200 00	80 27
Ottawa	4	-----	11	323	3,442	359 36	126 10	811 78
Presque Isle	4	5	1	2	67	4 00	6 00	1 00
Roscommon	4	3	2	-----	355	5 00	100 00	61 74
Saginaw	10	8	10	71	3,953	145 74	-----	151 75
St. Clair	9	8	7	133	2,403	124 35	-----	147 37
St. Joseph	10	3	3	163	1,307	349 42	100 00	232 38
Sanilac	10	5	14	274	1,577	209 98	15 00	156 21
Schoolcraft	1	2	2	232	440	325 75	-----	-----
Shiawassee	8	7	3	120	1,037	133 43	25 00	110 85
Tuscola	11	3	12	233	2,394	236 51	10 00	71 77
Van Buren	6	3	9	330	3,893	533 60	200 00	212 59
Washtenaw	12	4	7	22	2,407	81 47	-----	136 74
Wayne	8	5	6	392	4,707	190 65	20 00	6,460 54
Wexford	-----	-----	15	363	2,210	393 16	157 18	7 32

TABLE XI.

Statistics of District Libraries as reported by School Inspectors for the year ending September 3, 1888.

Counties.	No. districts of less than 100 children reporting libraries.	No. of volumes reported in such libraries.	No. of districts of 100 or more children maintaining libraries.	No. of volumes added to the last-mentioned libraries during the year.	Whole No. of volumes in such libraries.	Amount paid for support of such libraries.	Amount of fines, etc., received from county treasurer for such libraries.
Totals.....	837	46,534	812	30,003	263,880	\$57,823 76	\$32,439 30
Alcona.....							
Alger.....							
Allegan.....	89	1,594	16	141	2,107	\$246 64	505 26
Alpena.....			8		2,341	435 00	123 89
Antrim.....	8	63	1		158	66 00	105 24
Arenac.....	4	148	1		114		
Baraga.....	1	230	1	20	296	211 25	25 95
Barry.....	11	285	3	216	1,653	379 30	503 73
Bay.....			5	670	13,478	184 76	77 99
Benzle.....			1	10	591	35 00	52 80
Berrien.....	17	446	9	244	2,570	355 95	700 41
Branch.....	22	909	4	125	315	336 34	425 89
Calhoun.....	43	1,719	6	1,008	10,942	1,143 63	498 51
Cass.....	33	1,280	5	45	1,018	72 41	426 24
Charlevoix.....			1	16	16	35 00	112 80
Cheboygan.....	3	207	3	137	463	172 34	380 68
Chippewa.....			1		225		338 52
Clare.....							
Clinton.....	7	81	5	13	265	73 91	274 06
Crawford.....	3	44					3 58
Delta.....			1	3	306	23 75	206 27
Eaton.....	1	17	1	123	393	172 47	127 45
Emmet.....	4	56				2 00	
Genesee.....	21	720	4	259	6,897	951 14	1,333 91
Gladwin.....	1	4				35 90	
Gogebic.....			1	10	15		
Grand Traverse.....			1	40	300	330 00	74 63

STATISTICS OF DISTRICT LIBRARIES.

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TABLE XI.—Continued.

Counties.	No. districts of less than 100 children reporting libraries.	No. of volumes reported in such libraries.	No. of districts of 100 or more children maintaining libraries.	No. of volumes added to the last-mentioned libraries during the year.	Whole No. of volumes in such libraries.	Amount paid for support of such libraries.	Amount of fines, etc., received from county treasurer for such libraries.
Gratiot.....	8	250	5	251	1,389	\$340 00	\$487 59
Hillsdale.....	81	768	4	50	555	101 46	505 39
Houghton.....			7	318	3,493	495 12	505 39
Huron.....	8	46	8	22	922	45 50	98 05
Ingham.....	9	394	4	533	6,454	775 10	815 41
Ionia.....	8	96	6	323	937	547 75	408 11
Iosco.....	1	25	2	55	547	146 62	181 65
Iron.....			1	200	200	100 00	
Isabella.....	7	141	2	120	399	60 50	224 24
Ile Royal.....							
Jackson.....	34	1,609	8	149	1,315	127 45	378 63
Kalamazoo.....	64	3,201	4	1,131	15,479	2,214 86	2,273 38
Kalkaska.....	11	415	1	49	232	115 98	25 32
Kent.....	14	506	7	4,997	24,865	8,458 54	2,480 23
Keweenaw.....	4	2,104				10 00	114 52
Lake.....	1	12	2		68	25 00	
Lapeer.....	20	695	7	77	1,542	93 80	242 39
Leelanaw.....			1	40	97		
Lenawee.....	59	2,312	13	479	3,580	906 90	323 36
Livingston.....	8	241	2	20	246	20 50	395 40
Luce.....	8	241	1		11		
Mackinac.....			1		323	46 00	208 89
Macomb.....	7	236	11	118	2,641	233 69	394 47
Manistee.....	7	342	5	376	629	42 33	807 55
Manitou.....			1		50		
Marquette.....			5	633	5,690	833 35	803 56
Mason.....	3	78	1		2,000	236 40	525 90
Mecosta.....	7	169	4	72	2,166	224 62	373 94
Menominee.....	4	273	2	155	764	379 30	19 96
Midland.....	8	377	2		1,027	42 00	14 35
Missaukee.....	5	243				51 33	
Monroe.....	5	117	3	461	2,672	411 95	484 07
Montcalm.....	7	253	6	85	935	237 73	304 55
Montmorency.....	1	30					
Muskegon.....	1	114	3	791	5,025	1,391 72	344 44

TABLE XI.—Continued.

Counties.	No. districts of less than 100 children reporting libraries.	No. of volumes reported in such libraries.	No. of districts of 100 or more children maintaining libraries.	No. of volumes added to the last-mentioned libraries during the year.	Whole No. of volumes in such libraries.	Amount paid for support of such libraries.	Amount of fines, etc., received from county treasurer for such libraries.
Newaygo.....	7	584	3	63	71	\$15 00	\$12 60.
Oakland.....	30	1,592	4	280	2,011	452 40	542 53
Oceana.....	5	811				84 00	12 00.
Ogemaw.....							
Ontonagon.....	3	309	2	98	1,646	100 00	799 01
Osceola.....	1	40	2	18	455	68 55	20 73.
Oscoda.....							
Otsego.....	1	87				5 25	133 33.
Ottawa.....	13	801	11	165	3,223	475 96	370 80.
Presque Isle.....	11	515	1		90	105 08	
Roscommon.....							
Saginaw.....	33	1,706	8	1,065	14,517	1,741 05	829 05.
St. Clair.....	27	883	9	107	2,323	239 55	425 75.
St. Joseph.....	42	1,909	6	115	1,623	863 04	828 05.
Sanilac.....	8	303	7	16	311	20 70	74 56.
Schoolcraft.....							
Shiawassee.....	10	312	5	160	990	110 95	265 27
Tuscola.....	16	536	8	43	1,028	137 47	85 41
Van Buren.....	14	317	6	18	333	135 74	347 91
Washtenaw.....	10	200	6	447	5,366	986 81	525 13.
Wayne.....	73	13,117	31	12,811	93,353	27,433 95	7,133 41.
Wexford.....	2	10	1	117	430	177 87	15 00.

TABLE XII.

*Branches of Instruction as Reported by School Inspectors for the year ending
September 3, 1888.*

Counties.	Number of districts in which instruction is given in												
	Orthography.	Reading.	Writing.	Arithmetic.	Geography.	English Grammar.	U. S. History.	Civil Govern-ment.	Algebra.	Geometry.	Physiology.	Natural Philosophy.	Botany.
Totals.....	6,944	6,953	6,953	6,953	6,947	6,827	6,294	3,704	1,725	479	5,044	550	327
Alcona.....	22	22	22	22	21	19	18	13	5	-----	12	-----	-----
Alger.....	7	7	7	7	7	5	12	3	1	-----	6	-----	-----
Allegan.....	176	176	176	176	176	178	162	96	55	15	142	15	18
Alpena.....	20	20	20	20	20	18	15	7	2	2	13	7	3
Antrim.....	56	65	65	65	65	65	63	48	6	2	54	10	3
Arenac.....	26	26	26	26	25	25	24	19	5	4	20	4	4
Baraga.....	10	10	10	10	10	10	10	9	3	1	6	1	2
Barry.....	147	147	147	147	147	147	133	85	41	13	85	4	3
Bay.....	49	49	49	49	49	46	45	26	12	3	40	4	2
Benzie.....	44	44	44	44	44	42	41	17	3	1	41	2	1
Berrien.....	148	148	148	148	148	148	142	77	48	12	112	12	7
Branch.....	180	180	180	180	180	130	118	68	39	5	92	8	4
Calhoun.....	164	164	164	164	164	163	147	85	67	10	134	18	12
Cass.....	114	114	114	114	114	113	110	65	42	6	102	11	5
Charlevoix.....	68	68	68	68	68	67	60	37	12	4	54	3	3
Cheboygan.....	52	52	52	52	52	45	41	23	8	5	48	5	2
Chippewa.....	36	36	36	36	36	36	24	22	2	1	31	2	1
Clare.....	36	36	36	36	36	36	31	19	6	2	32	2	-----
Clinton.....	131	131	131	131	131	127	120	78	24	4	109	13	5
Crawford.....	41	41	41	41	41	36	34	25	7	2	37	5	2
Delta.....	35	35	35	35	34	32	25	7	2	1	19	2	1
Eaton.....	149	149	149	149	148	149	147	79	27	6	89	6	4
Emmet.....	61	61	61	61	61	55	49	18	5	2	51	2	2
Genesee.....	159	159	159	159	159	159	148	112	54	9	114	9	4
Gladwin.....	21	21	21	21	21	21	19	7	1	1	18	1	-----
Gogebic.....	9	9	9	9	9	7	4	3	2	1	7	1	1
Grand Traverse.....	58	58	58	58	58	57	53	28	8	1	53	1	1
Gratiot.....	131	131	131	131	131	131	129	79	31	8	104	12	7
Hillsdale.....	166	166	166	166	166	163	151	77	76	10	116	13	13

SUPERINTENDENT'S REPORT.

TABLE XII.—Continued.

Counties.	Number of districts in which instruction is given in												
	Orthography.	Reading.	Writing.	Arithmetic.	Geography.	English Grammar.	U. S. History.	Civil Govern- ment.	Algebra.	Geometry.	Physiology.	Natural Philosophy.	Botany.
Houghton.....	19	19	19	19	19	17	17	12	10	7	13	8	7
Huron.....	105	105	105	105	105	102	95	34	20	7	77	11	5
Ingham.....	135	135	135	135	135	134	123	78	43	8	89	10	5
Ionia.....	143	143	143	143	143	143	138	80	33	5	86	7	8
Iosco.....	23	23	23	23	23	23	20	14	4	5	20	5	4
Iron.....	8	8	8	8	8	8	7	3	2	.....	7	1	.....
Isabella.....	100	100	100	100	100	100	92	57	20	10	80	4	2
Isle Royal.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Jackson.....	147	147	147	147	147	147	136	78	63	14	118	14	8
Kalamazoo.....	131	131	131	131	131	131	122	78	55	9	84	12	6
Kalkaska.....	52	52	52	52	52	51	50	27	7	1	48	3	1
Kent.....	214	214	214	214	214	214	188	130	77	10	155	15	8
Keweenaw.....	9	9	9	9	9	9	7	6	2	.....	8	1	.....
Lake.....	46	46	46	46	46	43	36	27	7	1	40	2	.....
Lapeer.....	136	136	136	136	136	136	110	87	30	18	87	17	12
Leelanaw.....	53	53	53	53	53	50	46	23	8	1	51	4	1
Lenawee.....	199	199	199	199	199	199	188	105	56	23	139	15	12
Livingston.....	134	134	134	134	134	127	115	85	48	11	100	15	11
Luce.....	5	5	5	5	5	4	5	3	1	.....	4	.....	.....
Mackinac.....	32	32	32	32	32	23	20	11	2	2	15	1	1
Macomb.....	112	112	112	112	112	110	100	63	34	11	96	15	11
Manistee.....	48	48	48	48	48	48	44	27	7	1	43	1	1
Manitou.....	5	5	5	5	5	4	4	4	.....	.....	5	.....	.....
Marquette.....	36	36	36	36	36	36	33	21	15	11	31	5	3
Mason.....	54	54	54	54	54	52	47	23	4	1	46	3	2
Mecosta.....	89	89	89	89	89	86	80	33	8	4	78	3	3
Menominee.....	42	42	42	42	42	42	31	11	5	4	26	3	2
Midland.....	54	54	54	54	54	54	48	32	8	3	38	4	2
Missaukee.....	40	40	40	40	40	36	31	17	3	1	26	1	.....
Monroe.....	130	130	130	130	130	129	119	63	16	5	79	4	3
Montcalm.....	123	123	123	123	123	127	111	64	30	12	97	9	5
Montmorency.....	20	20	20	20	20	20	19	13	2	.....	19	.....	1
Muskegon.....	86	86	86	86	86	86	72	41	14	5	74	6	4
Newaygo.....	103	103	103	103	103	102	116	50	16	6	74	8	4
Oakland.....	213	213	213	213	213	213	176	113	68	29	111	21	13
Oceana.....	66	66	66	66	66	66	79	43	7	2	74	7	3

TABLE XII.—Continued.

Counties.	Number of districts in which instruction is given in												
	Orthography.	Reading.	Writing.	Arithmetic.	Geography.	English Grammar.	U. S. History.	Civil Govern-ment.	Algebra.	Geometry.	Physiology.	Natural Philosophy.	Botany.
Ogemaw	36	36	36	36	36	34	33	27	4	2	32	2	1
Ontonagon	10	10	10	10	10	9	8	6	3	2	6	2	1
Osceola	85	85	85	85	85	78	70	42	11	7	60	5	3
Oscoda	28	28	28	28	27	25	20	9	3	.....	17	3	.....
Otsego	40	40	40	40	40	33	32	16	3	1	27	2	.....
Ottawa	119	119	119	119	119	114	110	64	21	4	97	11	5
Presque Isle	27	27	27	27	27	25	24	14	3	1	12	3	.....
Roscommon	14	14	14	14	14	13	13	7	1	.....	10	1	.....
Saginaw	148	148	148	148	148	148	131	79	40	17	131	14	6
St. Clair	154	154	154	154	154	154	143	103	41	12	93	14	5
St. Joseph	125	125	125	125	125	125	109	64	33	12	69	11	6
Sanilac	134	134	134	134	134	133	128	96	44	12	92	10	4
Schoolcraft	17	17	17	17	17	17	13	2	2	.....	7	1	.....
Shiawassee	123	123	123	123	123	122	122	74	33	8	92	8	5
Tuscola	142	142	142	142	142	141	134	72	35	10	109	18	9
Van Buren	155	155	155	155	155	155	145	78	32	8	94	6	6
Washtenaw	167	167	167	167	167	166	153	64	50	11	93	15	9
Wayne	149	149	149	149	149	149	140	87	43	8	73	10	9
Wexford	68	68	68	68	67	61	55	22	8	5	56	6	5

TABLE XIII.

Private and Select Schools and School Apparatus as reported for the year ending September 3, 1888.

Counties.	Private and Select Schools.				Apparatus.		
	No. of schools.	No. of teachers employed.		Estimated number of pupils.	No. of districts reporting dictionaries.	No. of districts reporting maps.	No. of districts reporting globes.
		Men.	Women.				
Totals.....	294	266	475	81,073	8,780	2,434	1,947
Alcona.....					15	20	13
Alger.....					4	5	5
Allegan.....	4	2	4	330	115	56	58
Alpena.....					9	12	9
Antrim.....					32	26	19
Arenac.....					17	23	10
Baraga.....					5	8	4
Barry.....	2		2	35	76	24	23
Bay.....	14	15	14	1,470	24	23	24
Benzie.....					19	17	14
Berrien.....	3	1	2	40	97	40	46
Branch.....	1	2	2	15	67	33	27
Calhoun.....	5	8	13	722	130	47	30
Cass.....	2		2	20	83	25	28
Charlevoix.....					26	15	15
Cheboygan.....	2		7	283	19	21	13
Chippewa.....					7	17	7
Clare.....	1		3	20	14	13	12
Clinton.....	1		1	6	82	27	38
Crawford.....					15	16	10
Delta.....	2	1	8	580	14	18	14
Eaton.....	4	15	7	356	52	11	19
Emmet.....	1	1	3	92	20	11	4
Genesee.....	3	4	5	75	99	53	31
Gladwin.....					14	16	17
Gogebic.....					3	5	4
Grand Traverse.....					32	34	27
Gratiot.....					50	27	25
Hillsdale.....					104	42	40

TABLE XIII.—Continued.

Counties.	Private and Select Schools.				Apparatus.		
	No. of schools.	No. of teachers employed.		Estimated number of pupils.	No. of districts reporting dictionaries.	No. of districts reporting maps.	No. of districts reporting globes.
		Men.	Women.				
Houghton.....	5	2	16	1,050	15	15	14
Huron.....	18	9	5	811	30	63	41
Ingham.....	3	3	3	200	72	28	36
Ionia.....	5	2	6	256	80	33	24
Iosco.....					15	16	11
Iron.....					6	7	5
Isabella.....	1	1		50	31	21	17
Isle Royal.....							
Jackson.....					111	83	38
Kalamazoo.....	2		6	100	88	17	32
Kalkaska.....					27	23	11
Kent.....	19	23	31	2,897	144	97	71
Keweenaw.....	1		1	10	8	7	8
Lake.....					21	15	15
Lapeer.....	2		2	30	64	42	35
Leelanaw.....	1	1		35	18	22	10
Lenawee.....	8	5	10	495	127	77	62
Livingston.....	2	1	1	38	51	19	24
Luce.....					2	4	3
Mackinac.....	2		2	44	2	13	5
Macomb.....	16	11	9	965	67	41	41
Manistee.....	4	8	10	800	27	29	24
Manitou.....						2	2
Marquette.....	6	1	16	1,135	19	27	24
Mason.....					36	28	30
Mecosta.....	4	2	4	215	48	42	43
Menominee.....	4	1	7	333	22	24	26
Midland.....					32	42	25
Missaukee.....					18	26	17
Monroe.....	16	13	11	1,000	62	37	39
Montcalm.....					82	52	37
Montmorency.....					10	9	5
Muskegon.....	8	10	10	595	39	28	29
Newaygo.....	1	2	1	35	54	39	36
Oakland.....					121	53	37
Oceana.....	1	1	1	40	49	38	37

TABLE XIII.—*Continued.*

Counties.	Private and Select Schools.				Apparatus.		
	No. of schools.	No. of teachers employed.		Estimated number of pupils.	No. of districts reporting dictionaries.	No. of districts reporting maps.	No. of districts reporting globes.
		Men.	Women.				
Ogemaw.....					21	22	14
Ontonagon.....					6	6	5
Osceola.....	8	2	1	100	37	31	24
Oscoda.....	4	1	4	88	6	5	6
Otsego.....					23	19	16
Ottawa.....	1		2	50	95	81	55
Presque Isle.....	2	2		100	12	19	12
Roscommon.....					4	6	5
Saginaw.....	16	13	12	2,141	73	62	36
St. Clair.....	17	8	26	1,090	78	54	49
St. Joseph.....	2	2	3	71	63	24	28
Sanilac.....	3	2	1	80	57	49	37
Schoolcraft.....					7	6	3
Shiawassee.....					51	27	17
Tuscola.....	6	5	2	230	61	40	27
Van Buren.....	1	1		30	83	41	30
Washtenaw.....	11	12	8	650	88	48	28
Wayne.....	59	78	191	11,895	88	63	43
Wexford.....					35	24	20

TABLE XIV.

Examination and Certification of Teachers as reported by Secretaries of Boards of School Examiners for the year ending September 3, 1888.

Counties.	No. of public exam- inations.	Whole No. of appli- cants for regular cer- tificates.	Whole No. of appli- cants for Secretary's special certificates.	Number of Applicants receiving certificates.				No. licensed without experience in teach- ing.	No. of applicants hav- ing received some normal instruction.	No. of applicants hav- ing attended Insti- tute during the year.	No. of teachers hold- ing State certificates.	No. of teachers hold- ing Normal School certificates.	No. of legally qual- ified teachers in the county.	No. making teaching a permanent occu- pation.	No. of teachers' cer- tificates suspended.	No. of teachers' cer- tificates annulled.
				First.	Second.	Third.	Special.									
Totals.....	461	15,907	1,934	185	498	9,479	1,503	2,053	1,951	4,477	67	276	10,994	4,851	8	4
Alcona.....	8	38	12	1	1	23	8	6	6	3	.....	.....	28	11	.....	.....
Alger.....	4	8	5	1	.....	9	5	3	5	.....	.....	.....	9	6	.....	.....
Allegan.....	8	375	17	5	43	253	15	70	38	60	5	6	314	141	.....	.....
Alpena.....	2	51	16	.....	1	37	16	9	7	24	.....	.....	40	22	.....	.....
Antrim.....	5	141	21	3	6	66	21	6	4	.....	1	7	70	50	.....	.....
Arenac.....	5	46	20	2	2	26	15	5	6	25	.....	1	30	15	.....	1
Baraga.....	3	18	6	2	.....	14	6	2	6	2	.....	.....	21	8	.....	.....
Barry.....	7	331	37	3	11	231	30	39	26	78	.....	3	253	59	.....	.....
Bay.....	4	106	9	1	2	44	8	8	8	11	.....	1	68	64	.....	.....
Benzie.....	5	104	12	2	5	55	12	9	10	36	.....	.....	63	57	.....	.....
Berrien.....	8	526	19	1	5	348	19	50	68	161	3	3	360	100	.....	.....
Branch.....	7	269	19	1	6	110	18	34	28	60	1	6	246	185	3	.....
Calhoun.....	8	423	3	5	9	213	3	65	36	176	.....	4	253	78	.....	.....
Cass.....	8	250	65	1	3	140	60	10	22	60	1	6	147	100	.....	.....
Charlevoix.....	6	133	12	3	4	76	10	15	20	35	1	.....	90	48	.....	.....
Cheboygan.....	5	60	7	3	1	36	4	7	5	25	.....	2	46	13	.....	.....
Chippewa.....	4	71	33	.....	2	39	23	7	10	.....	.....	2	42	80	.....	.....
Clare.....	6	78	62	4	.....	54	44	21	14	22	.....	1	.....	30	.....	.....
Clinton*.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Crawford.....	5	43	16	.....	5	34	13	4	5	23	.....	1	36	34	.....	.....
Delta.....	2	52	14	1	3	21	12	6	3	.....	.....	2	42	32	.....	.....
Eaton.....	7	375	20	5	6	248	7	70	13	100	.....	2	256	70	.....	1
Emmet.....	5	110	30	2	5	62	21	15	1	40	1	.....	68	34	.....	.....
Genesee.....	8	421	6	5	9	208	4	51	94	163	1	.....	224	81	.....	.....
Gladwin.....	6	26	12	.....	.....	18	9	4	8	19	.....	.....	21	11	.....	.....
Gogebic.....	4	23	11	1	3	20	11	8	4	.....	.....	1	24	5	.....	.....
Gd. Traverse.....	6	150	19	1	4	90	17	12	28	55	.....	8	113	50	.....	.....
Gratiot.....	6	276	74	5	5	117	69	48	35	61	1	7	233	48	.....	.....

* No report received from this county.

TABLE XIV.—Continued.

Counties.	No. of public examinations.	Whole No. of applicants for regular certificates.	Whole No. of applicants for Secretary's special certificates.	Number of applicants receiving certificates.				No. licensed without experience in teaching.	No. of applicants having received some normal instruction.	No. of applicants having attended Institute during the year.	No. of teachers holding State certificates.	No. of teachers holding Normal School certificates.	No. of legally qualified teachers in the county.	No. making teaching a permanent occupation.	No. of teachers' certificates suspended.	No. of teachers' certificates annulled.
				First.	Second.	Third.	Special.									
Hilledale	6	489	.....	2	18	271	.....	23	112	194	.....	8	271	128	.....	.....
Houghton	4	144	10	6	5	115	7	15	10	.....	4	27	134	98	.....	.....
Huron	7	396	80	2	5	101	60	25	25	100	3	8	120	90	.....	.....
Ingham	8	622	86	1	8	235	80	62	38	149	.....	8	258	85	8	1
Ionia	9	473	25	3	11	282	20	58	29	187	1	1	208	88	.....	.....
Iosco	4	50	8	.....	1	45	8	21	8	.....	.....	2	60	54	.....	.....
Iron	4	15	4	1	.....	13	4	3	4	.....	.....	.....	16	12	.....	.....
Isabella	6	183	27	6	8	91	21	14	22	54	2	5	120	.....	.....	.....
Jackson	9	811	14	7	21	309	8	66	52	98	2	14	371	180	.....	.....
Kalamazoo	8	469	62	3	16	214	29	62	9	71	1	5	238	87	.....	.....
Kalkaska	4	85	13	1	.....	43	7	4	7	36	.....	1	49	.....	.....	.....
Kent	6	332	20	3	18	328	10	54	10	237	.....	1	320	.....	.....	1
Keweenaw	3	6	5	.....	.....	8	5	2	3	5	.....	1	12	12	.....	.....
Lake	4	71	18	1	1	43	13	5	4	33	.....	1	58	50	.....	.....
Lapeer	5	334	56	1	12	228	40	60	8	100	.....	9	240	90	.....	.....
Leelanaw	6	84	15	.....	1	57	12	12	3	17	.....	3	62	51	.....	.....
Lenawee	3	335	18	4	6	233	15	104	42	129	3	8	311	145	1	.....
Livingston	8	315	30	.....	5	194	22	47	10	82	3	12	270	135	.....	.....
Luce	4	11	4	.....	2	7	4	2	2	.....	1	1	5	5	.....	.....
Mackinac	4	40	14	.....	.....	27	14	6	.....	5	.....	.....	27	27	.....	.....
Macomb	6	384	25	2	7	212	16	3	25	77	1	4	200	100	.....	.....
Manistee	6	106	25	1	.....	55	15	11	5	40	.....	1	56	28	.....	.....
Manitou	7	8	2	.....	.....	7	2	1	.....	.....	.....	.....	7	7	.....	.....
Marquette	5	114	42	1	5	76	35	12	18	37	4	9	129	90	.....	.....
Mason	4	122	29	.....	.....	53	28	9	5	23	.....	.....	57	.....	.....	.....
Mecosta	6	193	33	2	14	100	11	21	16	44	.....	1	149	20	.....	.....
Menominee	7	93	26	1	2	52	25	15	17	21	.....	.....	95	65	.....	.....
Midland	4	104	.....	1	3	41	40	6	13	.....	.....	10	124	12	.....	.....
Missaukee	5	74	20	.....	1	45	17	2	11	33	.....	.....	49	34	.....	.....
Monroe	8	310	40	1	11	197	40	47	63	73	.....	5	232	.....	.....	.....
Montcalm	8	370	65	1	3	278	44	56	22	115	3	4	285	200	.....	.....
Montmorency	4	32	2	1	.....	27	2	.....	6	2	.....	.....	21	19	.....	.....
Muskegon	6	208	31	1	8	133	29	20	21	47	1	4	157	98	.....	.....
Newaygo	6	203	60	5	7	121	36	24	22	51	1	1	139	121	.....	.....
Oakland	7	504	41	2	18	316	30	37	48	127	2	8	396	55	.....	.....
Oceana	8	236	24	.....	8	124	15	20	12	45	.....	.....	133	60	1	.....

TABLE XIV.—Continued.

Counties.	No. of public exam- inations.	Whole No. of appli- cants for regular cer- tificates.	Whole No. of appli- cants for Secretary's special certificates.	Number of applicants receiving certificates.				No. licensed without experience in teach- ing.	No. of applicants hav- ing received some normal instruction.	No. of applicants hav- ing attended insti- tute during the year.	No. of teachers hold- ing						
				First.	Second.	Third.	Special.										
Ogemaw.....	4	66	4	.....	1	41	3	1	16	27	1	1	45	42	.....	...	...
Ontonagon.....	4	22	3	3	.....	11	2	2	1	5	.....	5	25	16	.....	...	...
Oscoda.....	5	125	45	3	5	20	26	11	22	74	.....	5	137	133	.....	...	...
Oscoda.....	4	.....	.....	.....	.....	22	12	5	.....	.....	.....	.....	12	15	.....	...	...
Otsego.....	5	62	10	1	1	20	10	8	15	25	.....	.....	46	41	.....	...	...
Ottawa.....	7	225	26	6	17	123	22	25	23	68	1	4	211	171	.....	...	...
Presque Isle..	4	35	24	2	.....	9	19	8	7	7	.....	2	30	11	.....	...	...
Rosecommon*	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	...	...
Saginaw.....	7	.....	30	4	12	173	24	55	57	75	1	1	194	100	.....	...	...
St. Clair.....	8	361	50	4	12	150	7	45	140	112	4	2	206	100	.....	...	...
St. Joseph.....	8	360	40	5	6	216	15	24	10	60	5	15	247	174	.....	...	...
Sanilac.....	6	372	2	5	26	122	2	20	100	41	1	1	161	117	.....	...	...
Schoolcraft*	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	...	...
Shiawassee.....	6	311	73	6	10	212	61	85	90	125	1	1	219	120	.....	...	...
Tuscola.....	5	112	21	3	25	122	21	47	11	33	.....	1	152	115	.....	...	...
Van Buren.....	3	424	40	4	5	120	15	40	15	100	3	9	202	100	.....	...	...
Washtenaw.....	7	.....	30	4	7	111	27	.....	.....	.....	.....	3	202	5	.....	...	...
Wayne.....	6	227	4	12	.....	205	4	74	107	153	4	8	220	.....	.....	...	...
Wexford.....	6	176	22	.....	.....	95	23	10	15	54	.....	.....	97	49	.....	...	...

*No reports received from these counties.

TABLE XV.

Condition of Schools and School Houses as Reported by Secretaries of Boards of Examiners of the year ending September 3, 1888.

Counties.	No. of districts visited by the secretary during the year.	No. of schools supplied with dictionary.	No. of schools supplied with maps.	No. of schools supplied with globes.	No. of school-houses properly ventilated and heated.	No. of schools having uniform text-books in each branch.	No. of schools having a prescribed course of study.	No. of schools properly classified.	No. of schools in which physiology, etc., is taught.	No. of districts that have adopted text-book in physiology, etc.
Totals.....	6,564	3,462	2,408	1,725	2,063	4,460	675	3,068	5,188	2,782
Alcona.....	19	17	18	5	6	20	16	19	a 20	-----
Alger.....	7	4	5	6	8	10	4	10	8	6
Allegan.....	b 151	127	88	37	112	120	12	176	160	116
Alpena.....	40	17	26	8	-----	12	43	10	42	-----
Antrim.....	63	27	21	13	51	43	4	47	48	30
Arenac.....	26	17	16	13	15	26	1	18	26	1
Baraga.....	12	6	10	10	13	13	11	12	8	3
Barry.....	142	73	21	16	15	93	6	121	89	-----
Bay.....	49	24	10	21	c 20	39	1	30	a 40	-----
Benzie.....	41	17	29	9	30	28	2	12	41	20
Berrien.....	150	109	65	40	45	124	40	81	115	115
Branch.....	129	74	54	58	103	82	13	115	109	31
Calhoun.....	165	139	25	10	150	100	15	-----	132	132
Cass.....	114	85	40	20	100	100	3	114	114	113
Charlevoix.....	69	36	15	5	20	50	2	40	-----	-----
Cheboygan.....	51	26	34	8	40	42	3	33	32	24
Chippewa.....	30	6	11	3	-----	36	1	30	37	1
Clare.....	42	31	26	7	12	32	8	3	28	2
Clinton*.....	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Crawford.....	40	16	16	8	13	6	1	6	40	2
Delta.....	22	26	23	12	16	8	2	28	22	-----
Eaton.....	146	56	25	13	-----	125	5	5	146	50
Emmet.....	50	20	12	4	2	21	2	2	63	6
Genesee.....	160	112	80	43	34	112	7	73	132	72
Gladwin.....	19	†	†	11	-----	22	1	-----	22	11
Gogebic.....	10	9	8	6	8	4	2	5	10	8
Grand Traverse...	52	29	36	31	40	47	10	51	50	48

a Oral instruction given in some districts.

b The other 33 districts were visited by assistant visitor.

c Heating and ventilation fairly good.

* No report received from this county.

† Not reported.

CONDITION OF SCHOOLS AND SCHOOL HOUSES.

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TABLE XV.—Continued.

Counties.	No. of districts visited by the secretary during the year.	No. of schools supplied with dictionary.	No. of schools supplied with maps.	No. of schools supplied with globes.	No. of school-houses properly ventilated and heated.	No. of schools having uniform text-books in each branch.	No. of schools having a prescribed course of study.	No. of schools properly classified.	No. of schools in which physiology, etc., is taught.	No. of districts that have adopted text-book in physiology, etc.
Gratiot	121	62	27	13	a 11	42	18	18	87	23
Hillsdale	152	128	101	41	122	47	17	41	118	74
Houghton	20	20	20	20	18	20	20	20	20	8
Huron	108	32	59	50	50	70	7	39	74	33
Ingham	132	86	45	25	27	49	23	57	107	20
Ionia	142	77	19	10	.....	52	9	9	92	.....
Iosco	23	14	15	6	.....	12	3	3	24	15
Iron	8	6	8	5	1	9	1	6	6	3
Isabella	86	.....	.....	.....	.....	102	3	.....	b 96	b 96
Isle Royal .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Jackson	157	113	57	43	25	127	31	111	145	138
Kalamazoo	139	53	42	27	8	46	18	67	119	.....
Kalkaska	53	31	38	38	17	18	.....	21	30	4
Kent	230	155	125	105	12	193	29	57	211	201
Keweenaw .....	.....	8	7	8	.....	.....	.....	9	8	.....
Lake	31	22	13	13	.....	11	5	4	30	.....
Lapeer	136	55	42	42	10	110	15	15	100	90
Leelanaw	53	10	4	4	.....	42	2	35	48	48
Lenawee	198	121	66	48	116	168	15	64	186	127
Livingston	132	50	10	18	50	100	10	15	115	8
Luce	5	5	5	2	5	5	1	1	5	5
Mackinac	20	5	10	5	25	.....	.....	.....	30	15
Macomb	112	50	25	18	78	86	13	100	c 110	50
Manistee	49	27	30	10	10	49	2	5	49	36
Manitou	4	.....	1	2	3	5	5	5	5	5
Marquette	30	23	33	31	27	34	20	31	34	31
Mason	55	†	†	†	†	†	†	†	55	†
Mcosta	95	51	33	34	d	64	3	20	15	19
Menominee ‡	39	24	31	31	3	30	11	15	32	18
Midland	38	.....	.....	.....	.....	.....	.....	.....	.....	.....
Missaukee	40	19	21	20	28	20	.....	37	35	.....
Monroe	138	38	21	20	113	110	2	93	50	.....
Montcalm	135	82	51	16	2	104	6	110	120	84

a Nearly all well heated, but poorly ventilated.

b Estimated.

c Oral instruction given in some districts.

d Eighty-three fairly heated; 72 fairly ventilated.

† Not reported.

‡ Not including Menominee city.

TABLE XV.—Continued.

Counties.	No. of districts visit- ed by the secretary during the year.	No. of schools sup- plied with diction- ary.	No. of schools sup- plied with maps.	No. of schools sup- plied with globes.	No. of school-houses properly ventilated and heated.	No. of schools having uniform text-books in each branch.	No. of schools having a prescribed course of study.	No. of schools prop- erly classified.	No. of schools in which physiology, etc., is taught.	No. of districts that have adopted text- book in physiology, etc.
Montmorency	22	15	12	12	-----	22	-----	6	22	22
Muskegon.....	72	31	43	21	30	60	12	60	43	32
Newaygo.....	102	41	20	26	1	68	3	40	-----	41
Oakland	220	165	77	58	123	117	56	63	113	118
Oceana	85	55	30	45	a	85	3	40	85	18
Ogemaw.....	34	21	24	21	30	34	-----	33	34	1
Ontonagon	10	8	9	8	7	8	8	8	9	9
Osceola.....	77	33	28	13	b	b 30	b 3	b 14	70	24
Oscoda	22	8	6	6	18	20	8	11	14	-----
Otsego.....	37	22	19	14	3	18	1	20	34	3
Ottawa	114	79	37	30	85	102	3	102	97	94
Presque Isle.....	29	7	15	18	12	21	-----	22	25	25
Roscommon*	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Saginaw	146	86	100	75	6	145	12	12	140	56
St. Clair.....	144	36	25	12	1	78	10	-----	56	15
St. Joseph	125	76	39	77	8	99	9	110	100	79
Sanilac	126	51	57	22	5	103	5	89	100	75
Schoolcraft*	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Shiawassee.....	82	45	33	22	-----	106	5	-----	25	15
Tuscola.....	137	52	24	26	26	111	8	104	110	85
Van Buren	120	55	15	16	45	57	27	55	160	-----
Washtenaw	163	73	26	16	9	99	5	104	74	74
Wayne.....	152	c	120	47	-----	c	c	100	152	†
Wexford.....	66	33	19	18	45	39	7	85	d 32	e 4

a Nearly all well heated but poorly ventilated.
b Not including graded schools.
c Nearly all.
d It is taught orally in some others.
e Text-books complying with the law are used in many districts that have not formally adopted them.
* No reports received from these counties.
† Not reported.

TABLE XVI.

Miscellaneous Statistics as Reported by Secretaries of County Boards of School Examiners for the Year ending September 3, 1888.

Counties.	No. of meetings of county teachers' associations.	No. of meetings of township teachers' associations.	No. of days devoted to meetings of the county board.	Amount allowed by board of supervisors for stationery, etc.	Amount of per diem compensation received by members of the county board other than the secretary.	Salary of the secretary.	Amount of institute fees.
Totals.....	160	134	1,186½	\$2,508 47	\$10,323 75	\$61,125 00	\$8,631 00
Alcona			9	\$6 00	\$60 00	\$275 00	\$25 50
Alger.....			12	3 00	10 00	200 00	6 50
Allegan	1	8	24		232 00	1,260 00	239 50
Alpena.....			9	10 23	72 00	300 00	44 00
Antrim	2		10		150 00	650 00	74 00
Arenac.....	2		3	8 83	52 00	300 00	32 50
Baraga.....		1	8	9 00	24 00	200 00	9 00
Barry	2	4	11	15 74	164 00	1,000 00	197 50
Bay	3		15	25 60	120 00	490 00	34 50
Benzie			7		100 00	300 00	56 50
Berrien		4	12½	80 00	100 00	1,000 00	273 00
Branch.....	3	2	10	110 50	80 00	1,200 00	147 00
Calhoun.....	6		25	100 00	238 00	1,800 00	354 00
Cass.....	2	5	18	89 20	293 00	800 00	187 50
Charlevoix	4		18		150 00	670 00	69 50
Cheboygan.....	3		12	8 00	96 00	400 00	23 50
Chippewa.....			8	15 00	64 00	300 00	43 50
Clare.....	2		12		96 00	420 00	46 50
Clinton*.....							
Crawford.....			12		100 00	400 00	41 50
Delta.....			4	20 00	44 00	300 00	29 00
Eaton	3	4	20	143 65	160 00	1,200 00	223 00
Emmet.....	3		9½	25 00	46 00	570 00	51 50
Genesee.....	3		11		124 00	1,400 00	226 00
Gladwin			12	6 00	96 00	250 00	19 50
Gogebic			6	75 00	48 00	300 00	15 00
Grand Traverse.....	2		14		214 00	630 00	74 00
Gratiot.....	2	4	15		120 00	1,200 00	116 00

* No report received from this county.

TABLE XVI.—Continued.

Counties.	No. of meetings of county teachers' associations.	No. of meetings of township teachers' associations.	No. of days devoted to meetings of the county board.	Amount allowed by board of supervisors for stationery, etc.	Amount of rate dish of the county board other than the secretary.	Salary of the secretary.	Amount of institute fees.
Hillsdale.....	2		14	\$34 00	42 00	\$1,400 00	\$315 00
Houghton.....	1		18	85 00	44 00	300 00	82 00
Huron.....	4				140 00	900 00	145 50
Ingham.....	5		24	180 00	198 00	1,250 00	235 50
Ionia.....	4	28	9	108 85	195 00	1,300 00	191 50
Iosco.....				10 00		100 00	26 50
Iron.....	1		6	30 50	48 00	300 00	10 00
Isabella.....	8	5	20	8 25	168 00	900 00	91 00
Isle Royal.....							
Jackson.....	1	6	24	141 24	264 00	1,500 00	264 50
Kalamazoo.....	2	6	12	43 34	140 00	1,200 00	198 00
Kalkaska.....	2	1	12	87 00	96 00	530 00	83 00
Kent.....	2	6	48	127 00	101 00	1,500 00	169 50
Keweenaw.....			9			100 00	13 50
Lake.....	2		10½		82 00	500 00	26 50
Lapeer.....	4	7	16	36 00	128 00	1,050 00	199 50
Leelanaw.....	1		15		180 00	500 00	40 00
Lenawee.....	3	5	19	26 50	152 00	1,200 00	203 00
Livingston.....	2	2	11		162 00	1,200 00	176 00
Luce.....			8	1 20		180 00	10 50
Mackinac.....			8	50 00	64 00	300 00	24 00
Macomb.....	1	4	18	75 00	144 00	1,400 00	150 50
Manistee.....	4		18	11 34	144 00	520 00	65 00
Manitou.....			7	5 00	96 00	100 00	5 50
Marquette.....			16	48 22	112 00	380 00	79 00
Mason.....	2		20½	18 75	164 00	550 00	72 50
Mecona.....	2	10	4	11 75	128 00	250 00	85 50
Menominee.....	1		15	17 38	60 00	410 00	71 50
Midland.....			14½	15 65	116 00	350 00	54 00
Missaukee.....				19 20		450 00	26 50
Monroe.....	4		24			800 00	168 50
Montcalm.....	3	6	10	45 50	100 00	1,350 00	162 00
Montmorency.....			6		48 00	300 00	9 00
Muskegon.....		3	34½	35 00	276 00	910 00	26 00
Newaygo.....	13		7		56 00	1,080 00	127 00
Oakland.....	1		40		320 00	1,500 00	430 00

MISCELLANEOUS STATISTICS.

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TABLE XVI.—Continued.

Counties.	No. of meetings of county teachers' associations.	No. of meetings of township teachers' associations.	No. of days devoted to meetings of the county board.	Amount allowed by board of supervisors for stationery, etc.	Amount of per diem compensation received by members of the county board other than the secretary.	Salary of the secretary.	Amount of institute fees.
Oceana.....	4	2	9	.....	\$72 00	\$850 00	\$118 00
Ogemaw.....	8	.....	10	.....	80 00	420 00	25 00
Ontonagon.....	.....	.....	12	\$10 00	84 00	300 00	18 00
Osceola.....	3	4	5	.....	.....	900 00	74 50
Oscoda.....	.....	.....	8	.....	64 00	250 00	.....
Otsego.....	8	.....	30½	10 25	244 00	800 00	82 00
Ottawa.....	14	.....	44	65 00	176 00	1,150 00	187 50
Presque Isle.....	.....	.....	12	40 00	.....	800 00	23 50
Roscommon.....	.....	.....	.....	.....	.....	150 00	.....
Saginaw.....	.....	.....	28	115 50	358 00	1,300 00	208 50
St. Clair.....	2	.....	10	.....	80 00	1,400 00	.....
St. Joseph.....	2	.....	19	55 25	152 00	1,350 00	224 00
Sanilac.....	.....	.....	6	60 00	359 75	1,000 00	221 50
Schoolcraft.....	4	.....	12	.....	80 00	300 00	18 00
Shiawassee.....	3	2	5	12 50	.....	1,000 00	203 50
Tuscola.....	2	.....	50	.....	200 00	1,400 00	44 00
Van Buren.....	1	.....	9	40 00	72 00	1,200 00	233 00
Washtenaw.....	.....	.....	24	50 00	144 00	1,500 00	259 50
Wayne.....	2	.....	12	.....	96 00	1,500 00	.....
Wexford.....	5	.....	18	85 00	144 00	600 00	69 50

TABLE XVII.

Showing the Extent to which Physiology was taught in the Schools of the State during the Year ending September 3, 1888.

Counties.	No. of districts in the county.	No. of districts report- ing physiology taught.	No. of dis- tricts report- ing physiology not taught.	No. of districts not reporting.
Totals.....	7,087	5,488	611	928
Alcona.....	24	21	1	2
Alger.....	9	7	.....	2
Allegan.....	184	155	12	17
Alpena.....	21	15	5	1
Antrim.....	66	60	3	3
Arenac.....	27	26	.....	1
Baraga.....	11	8	2	1
Barry.....	147	107	17	23
Bay.....	51	40	7	4
Benzie.....	44	43	.....	1
Berrien.....	149	181	14	4
Branch.....	120	118	8	9
Calhoun.....	165	144	10	11
Cass.....	116	112	1	3
Charlevoix.....	69	58	3	8
Cheboygan.....	54	40	1	3
Chippewa.....	38	32	2	4
Clare.....	38	31	3	4
Clinton.....	120	109	9	12
Crawford.....	40	38	2	.....
Delta.....	35	16	5	14
Eaton.....	147	101	14	22
Emmet.....	61	52	5	4
Genesee.....	159	121	23	15
Gladwin.....	22	15	2	5
Gogebic.....	9	4	1	4
Grand Traverse.....	65	60	2	3
Gratiot.....	129	110	5	14
Hillsdale.....	167	144	6	17
Houghton.....	22	14	3	5
Huron.....	109	81	12	16

TABLE XVII.—Continued.

Counties.	No. of districts in the county.	No. of districts reporting physiology taught.	No. of districts reporting physiology not taught.	No. of districts not reporting.
Ingham	135	103	12	20
Ionia	144	94	16	34
Iosco	25	20	3	3
Iron	9	7	.....	2
Isabella	100	95	2	3
Isle Royal .....	.....	.....	.....	.....
Jackson	157	130	9	18
Kalamazoo	188	96	16	26
Kalkaska	51	47	2	2
Kent	214	168	24	23
Keweenaw	9	8	1	.....
Lake	46	40	1	5
Lapeer	128	103	15	20
Leelanaw	53	47	1	5
Lenawee	199	42	30	27
Livingston	134	100	9	25
Luce	6	3	.....	3
Mackinac	34	19	5	10
Macomb	112	98	4	10
Manistee	53	47	.....	5
Manitou	5	5	.....	.....
Marquette	36	28	1	7
Mason	56	47	1	8
Mecosta	100	84	4	12
Menominee	42	35	3	4
Midland	58	53	4	2
Missaukee	42	35	1	6
Monroe	138	78	22	38
Montcalm	135	110	5	20
Montmorency	20	20	.....	.....
Muskegon	93	71	10	12
Nawaygo	104	92	9	3
Oakland	216	125	36	45
Oceana	87	75	6	6
Ogemaw	41	34	.....	7
Ontonagon	11	6	2	3
Oscoda	85	69	8	8
Oscoda	30	23	3	5
Otsego	39	33	3	3
Ottawa	119	103	9	7
Presque Isle	32	16	4	12
Roscommon	18	12	2	4
Saginaw	148	119	6	23
St. Clair	154	109	17	28
St. Joseph	125	86	15	24
Sanilac	133	110	9	14
Schoolcraft	18	8	3	7
Shiawassee	123	93	12	18
Tascala	143	116	8	19
Van Buren	155	115	18	22
Washtenaw	168	105	18	45
Wayne	151	82	42	27
Wexford	68	58	2	3

TABLE XVIII.—Graded School Statistics, compiled from Inspectors' Reports for the year ending September 3, 1888.

Districts.	Counties.	No. of children between 5 and 20 years.	Estimated valuation of school property.	Amount paid for maintenance and instruction.	Average monthly wages of teachers.		Total expenditures.	Total indebtedness.	No. of children that attended school during the year.	No. of days of school.	No. of teachers employed.		Total wages of teachers for the year.	
					Men.	Women.					Men.	Women.	Men.	Women.
Totals.....	.....	818,944	\$8,680,997	\$1,702,587 40	\$77 66	\$29 99	\$3,256,720 48	\$1,408,102 86	198,907	91,100	657	3,294	\$449,121 79	\$1,240,850 21
Ada.....	Kent.....	145	\$5,500	\$885 50	\$52 00	\$28 39	\$1,539 16	.....	140	176	1	8	\$468 00	\$397 50
Addison.....	Lenawee.....	121	2,000	1,080 00	70 00	25 00	1,655 07	.....	105	180	1	2	680 00	450 00
Adrian.....	Lenawee.....	2,315	104,000	14,443 25	126 80	86 70	19,717 84	.....	1,500	193	3	29	8,800 00	10,643 25
Alba.....	Antrim.....	127	2,000	675 00	45 00	30 00	1,127 91	\$50 80	100	180	1	1	405 00	270 00
Albion.....	Calhoun.....	1,093	55,000	5,802 00	100 00	33 80	10,983 18	8,000 00	773	187	1	15	1,000 00	4,802 00
Alaska.....	Kent.....	104	2,000	498 00	50 00	16 00	753 82	200 00	80	180	1	1	450 00	48 00
Algonac.....	St. Clair.....	318	9,000	1,575 00	75 00	33 30	2,255 18	225 00	253	180	1	3	675 00	900 00
Allegan.....	Allegan.....	848	10,000	5,702 00	68 40	53 00	8,308 69	1,500 00	601	190	2	13	1,800 00	4,402 00
Allen.....	Hillsdale.....	120	8,000	900 00	56 25	28 10	1,207 41	.....	106	163	1	2	450 00	450 00
Allouez.....	Keweenaw.....	311	1,000	578 00	64 20	.....	847 95	.....	117	170	1	.....	578 00	.....
Alma.....	Gratiot.....	515	25,000	3,285 00	57 60	30 49	5,885 43	17,250 00	521	200	3	6	1,780 00	1,555 00
Almont.....	Lapeer.....	801	16,000	2,017 00	80 00	30 86	4,142 85	6,517 50	252	197	1	5	800 00	1,234 50
Alpena.....	'Alpena.....	3,140	50,000	12,340 00	100 00	38 90	19,466 94	.....	1,583	200	3	24	3,100 00	9,340 00
Ann Arbor.....	Washtenaw.....	2,989	165,000	24,925 22	121 00	43 55	39,995 48	32,000 00	1,966	192	9	35	9,631 50	15,243 73
Armada.....	Macomb.....	218	5,500	1,538 00	88 00	27 30	2,338 87	65 00	167	176	1	3	800 00	788 00
Ashley.....	Gratiot.....	261	3,000	855 00	33 25	27 50	1,443 62	2,480 00	130	190	1	2	362 50	522 50
Athens.....	Calhoun.....	108	4,000	845 00	56 11	28 90	989 09	.....	97	180	1	2	495 00	350 00
Atlantic Mine.....	Houghton.....	327	5,000	1,800 00	90 00	45 00	2,303 59	2,000 00	222	197	1	2	900 00	900 00
Attica.....	Lapeer.....	211	1,000	1,023 75	57 50	25 20	1,174 10	151	200	1	2	575 00	453 75

GRADED SCHOOL STATISTICS.

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GRADED SCHOOL STATISTICS.

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Cannonsburg.....	114	1,800	591 25	47 25	32 60	1,919 85	40 00	80	180	2	1	436 00	134 25
Capee.....	348	7,000	1,000 00	50 00	25 00	2,423 25	1,000 00	311	192	1	2	500 00	500 00
Carleton	176	8,000	720 00	50 00	30 00	890 24	.....	142	180	1	1	450 00	270 00
Caro.....	518	22,000	2,850 00	100 00	35 60	19,003 64	15,600 00	463	200	1	8	1,000 00	2,850 00
Carrollton No. 1.....	483	10,000	1,587 50	49 87	29 50	8,507 69	4,600 00	876	192	2	2	927 50	590 00
Carrollton No. 2.....	214	2,400	950 00	60 00	35 00	1,205 10	.....	125	195	1	1	600 00	850 00
Carson City	363	3,000	1,980 00	65 00	32 70	3,684 66	100 00	330	196	1	4	650 00	1,810 00
Carsonville.....	224	20,000	700 00	50 00	30 00	1,223 18	300 00	205	200	1	1	500 00	200 00
Caseville.....	244	5,000	1,250 00	65 00	35 00	1,610 86	.....	176	200	1	2	650 00	700 00
Casnovia.....	111	2,500	855 00	60 00	35 00	1,035 20	.....	113	180	2	1	540 00	315 00
Cass City.....	289	10,000	1,583 50	50 00	19 45	2,718 83	8,000 00	229	196	2	3	1,000 00	588 50
Cassopolis.....	371	15,000	3,140 00	90 00	37 33	5,004 61	.....	332	198	1	6	900 00	2,240 00
Cedar Springs.....	350	20,000	2,554 00	90 00	25 19	4,303 46	.....	340	190	1	5	900 00	1,654 00
Central Mine	230	8,500	1,800 00	111 00	44 40	2,262 04	.....	201	180	1	2	1,000 00	800 00
Centreville.....	291	20,000	2,500 00	60 00	41 10	4,512 12	262 00	211	200	2	5	1,200 00	1,562 00
Ceresco.....	86	800	535 00	46 00	24 20	715 54	.....	65	180	1	1	414 00	171 00
Charlevoix	380	4,000	2,345 00	105 00	31 00	3,590 63	.....	325	176	1	5	950 00	1,395 00
Charlotte	1,115	34,000	9,702 21	30 00	44 76	16,148 90	.....	1,056	195	1	21	300 00	9,402 21
Chase	328	3,000	1,800 00	80 00	33 30	2,014 62	.....	216	192	1	3	800 00	1,000 00
Cheboygan No. 1	633	11,000	3,461 00	75 00	36 30	5,355 25	.....	459	195	2	6	1,500 60	1,961 00
Cheboygan No. 2.....	237	.....	765 00	50 00	35 00	1,101 98	.....	116	180	1	1	450 00	315 00
Cheboygan No. 3.....	436	2,000	1,100 00	77 00	33 00	1,245 02	.....	190	210	1	1	770 00	330 00
Chelsea	417	6,000	2,965 20	60 00	30 30	4,690 59	306 22	330	200	1	9	600 00	2,365 00
Chesaning	414	15,500	2,406 00	70 00	23 40	4,988 06	4,500 00	336	196	1	6	700 00	1,706 00
Chickaming Tp. No. 3.....	149	500	260 00	.....	32 50	332 63	.....	81	160	.....	2	.....	260 00
Chippewa Lake.....	124	1,973	873 50	55 00	32 35	1,850 80	750 00	112	197	1	2	550 00	322 50
Clare.....	416	3,000	1,600 00	65 00	31 60	1,800 00	.....	325	198	1	3	650 00	950 00
Clarkston.....	166	8,000	1,940 00	70 00	27 00	1,608 35	.....	145	195	1	2	700 00	540 00

SUPERINTENDENT'S REPORT.

TABLE XVIII.—Continued.

Districts.	Counties.	No. of children between 5 and 20 years.	Estimated valuation of school property.	Amount paid for maintenance and instruction.	Average monthly wages of teachers.		Total expenditures.	Total indebtedness.	No. of children that attended school during the year.	No. of days of school.	No. of teachers employed.		Total wages of teachers for the year.	
					Men.	Women.					Men.	Women.	Men.	Women.
Clayton	Lenawee.....	108	\$3,000	\$720 00	\$53 30	\$26 80	\$394 42	.....	108	178	1	1	\$480 00	\$240 00
Climax.....	Kalamazoo.....	131	2,500	838 75	48 75	20 20	1,022 87	.....	100	180	1	2	308 75	440 00
Clinton.....	Lenawee.....	291	5,500	2,000 00	76 00	30 20	2,527 26	.....	262	200	2	5	760 00	1,240 00
Clio, No. 1.....	Genesee.....	98	1,000	464 00	.....	29 00	619 56	.....	82	157	.....	2	.....	464 00
Clio, No. 7.....	Genesee.....	201	5,500	800 00	50 00	30 00	5,382 30	\$5,000 00	137	196	1	1	500 00	300 00
Coldwater	Branch.....	1,263	71,000	10,160 00	88 30	28 30	29,207 67	11,000 00	1,055	196	8	20	2,500 00	7,660 00
Coleman	Midland	187	1,400	807 50	58 30	45 20	901 28	.....	140	167	1	2	176 00	632 50
Coloma.....	Berrien	174	850	645 00	55 00	30 00	778 26	115 00	132	180	1	1	500 00	270 00
Colon.....	St. Joseph.....	168	3,000	1,116 00	60 00	32 00	1,351 29	.....	181	180	1	2	640 00	576 00
Columbiaville.....	Lapeer	139	900	960 00	50 00	25 50	1,448 27	.....	163	197	1	2	500 00	460 00
Concord	Jackson.....	184	7,500	1,760 00	100 00	32 00	2,250 87	.....	189	192	1	3	800 00	960 00
Constantine	St. Joseph.....	361	35,000	3,550 00	100 00	36 40	4,583 23	.....	306	197	1	7	1,000 00	2,550 00
Coopersville.....	Ottawa	263	5,000	1,520 00	65 00	30 00	2,065 06	.....	273	200	1	8	585 00	600 00
Coral.....	Montcalm	192	1,800	940 00	50 00	31 40	1,269 18	.....	181	196	1	2	500 00	440 00
Corunna.....	Shiawassee	437	23,500	3,380 00	100 00	24 10	7,600 25	6,000 00	242	200	1	7	1,000 00	2,360 00
Covert	Van Buren.....	188	1,200	757 75	44 70	26 00	954 95	.....	143	157	1	2	357 75	400 00
Croswell.....	Sanilac.....	270	5,000	1,084 00	60 00	27 90	2,243 46	1,800 00	206	200	1	2	600 00	484 00
Crystal Falls.....	Iron.....	277	8,500	2,077 50	.....	53 26	3,598 20	8,000 00	227	200	.....	4	.....	2,077 50
Dansville	Ingham.....	137	4,000	1,540 00	70 00	28 00	2,536 47	.....	167	200	1	3	700 00	840 00
Davisburg.....	Oakland	72	1,200	454 00	88 30	24 90	515 90	60	180	1	1	280 60	324 00

GRADED SCHOOL STATISTICS.

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Davidson.....	146	4,300	804 00	28 88	1,382 70	1,500 00	186	176	2	804 00
Dearborn.....	810	2,500	855 00	60 00	85 00	1,116 08	198	180	1	1	540 00	815 00
DeCATur.....	868	10,000	3,058 00	100 00	84 30	5,808 10	.....	364	200	1	6	1,000 00	2,058 00
Deerfield.....	260	5,000	1,878 00	61 00	28 00	1,066 89	.....	226	176	1	4	550 00	828 00
Deer Lake.....	112	750	700 00	.....	85 00	858 76	.....	82	200	.....	2	.....	700 00
Detroit.....	65,122	1,387,000	242,071 23	191 00	54 88	548,273 61	.....	22,720	200	20	897	24,220 00	217,841 23
DeWitt.....	188	7,000	905 00	55 00	33 70	1,096 00	.....	110	180	1	2	500 00	405 00
Dexter.....	314	18,000	2,284 00	76 70	27 30	9,245 41	18,000 00	288	200	2	6	998 09	1,286 00
Dimondale.....	113	8,000	757 75	49 58	34 60	881 71	.....	110	180	1	1	446 25	811 50
Douglas.....	188	5,000	1,378 75	88 30	29 94	1,642 33	.....	189	176	1	3	750 00	625 75
Dowagiac.....	652	20,000	4,902 50	66 60	26 28	7,408 60	307 50	540	196	8	8	2,000 00	2,902 50
Dowlington.....	305	4,500	785 00	60 00	25 00	2,438 81	2,500 00	210	160	1	2	360 00	875 00
Drenthe.....	121	2,500	726 00	50 00	25 00	1,380 20	559 10	83	200	1	1	500 00	326 00
Dryden.....	200	3,500	1,098 75	45 21	32 50	1,810 98	.....	159	197	2	1	768 65	325 00
Dundee.....	445	20,000	2,600 00	85 00	29 16	9,040 09	10,275 00	852	200	1	6	850 00	1,750 00
East Holland.....	118	400	400 00	.....	23 50	502 48	45 00	101	180	.....	2	.....	400 00
East Lake.....	423	4,000	1,550 00	65 00	45 00	2,190 27	.....	263	230	1	2	650 00	900 00
East Saginaw.....	9,381	249,901	50,118 01	108 00	42 41	84,555 81	5,400 00	4,594	185	10	82	10,300 00	84,179 50
East Tawas.....	634	5,400	2,870 00	95 00	32 00	4,876 76	.....	482	200	1	6	950 00	1,920 00
Eaton Rapids.....	612	25,000	3,956 00	80 00	81 56	10,493 40	.....	500	200	1	10	800 00	3,156 00
Ecorse.....	267	3,900	727 50	55 56	27 50	901 76	.....	178	180	1	1	500 00	247 59
Edmore.....	270	2,500	1,600 00	70 00	30 00	2,016 70	.....	210	200	1	3	700 00	900 00
Edwardsburg.....	148	3,500	1,080 00	50 00	35 00	1,529 87	.....	147	180	1	2	450 00	630 00
Elk Rapids.....	423	27,000	4,250 00	100 00	33 85	7,263 42	15,000 00	382	185	1	8	1,000 00	3,250 00
Elm Hall.....	118	2,500	648 50	45 00	23 14	828 44	.....	109	200	1	2	405 00	243 50
Elsie.....	205	2,000	1,177 25	58 25	32 81	1,423 24	.....	200	180	2	5	291 25	886 70
Escanaba.....	1,676	33,200	4,728 75	120 00	39 21	16,173 53	21,659 81	657	198	1	9	1,200 00	3,528 75
Esserville.....	455	7,000	2,268 12	62 50	26 79	3,400 00	322 69	354	185	2	3	1,250 00	1,018 12

SUPERINTENDENT'S REPORT.

TABLE XVIII.—Continued.

Districts.	Counties.	No. of children between 5 and 20 years.	Estimated valuation of school property.	Amount paid for instruction.	Average monthly wages of teachers.		Total expenditures.	Total indebtedness.	No. of children that attended school during the year.	No. of days of school.	No. of teachers employed.		Total wages of teachers for the year.	
					Men.	Women.					Men.	Women.	Men.	Women.
Evart	Osceola	423	\$6,000	\$2,520 00	\$100 00	\$30 40	\$2,947 55	.....	423	200	1	5	\$1,000 00	\$1,520 00
Erle	Monroe	193	6,000	720 00	30 00	50 00	1,353 80	\$1,200 00	150	180	1	1	270 00	450 00
Farmington	Oakland	129	4,700	1,086 00	70 00	28 15	5,200 08	4,480 00	99	196	1	2	700 00	886 00
Farwell	Clare	216	4,000	1,215 00	65 00	35 00	1,865 88	.....	147	173	1	2	585 00	680 00
Fayette	Delta	153	.....	1,014 70	63 92	28 55	1,201 88	.....	142	190	1	1	629 25	885 45
Fenton	Genesee	580	50,000	5,505 00	80 00	35 50	8,757 08	2,000 00	527	200	2	11	1,000 00	8,905 00
Ferrysburg	Ottawa	233	1,600	904 00	58 00	22 00	1,198 23	.....	140	200	1	2	464 00	440 00
Fife Lake	Gd. Traverse ..	113	4,000	780 72	46 62	32 00	1,578 22	1,500 00	117	180	2	1	652 72	128 80
Filer City	Manistee	256	2,300	802 50	50 16	.....	1,875 65	.....	152	200	2	.....	802 50	.....
Fillmore Center	Allegan	172	900	468 00	.....	26 00	684 22	.....	127	180	.....	2	.....	468 00
Fillmore Tp. No. 4	Allegan	168	1,500	522 00	.....	29 00	604 08	.....	109	180	.....	2	.....	522 00
Fillmore Tp. No. 1	Allegan	154	2,000	516 25	.....	30 87	614 66	.....	117	175	.....	2	.....	516 25
Fillmore Tp. No. 5, fl.	Allegan	127	1,200	492 00	47 00	30 00	560 79	.....	111	180	1	1	233 00	210 00
Flat Rock	Wayne	240	12,000	1,203 71	70 27	25 00	1,525 52	.....	161	200	1	2	702 71	500 00
Flint	Genesee	2,449	140,000	24,333 50	125 00	38 54	45,609 60	86,420 00	1,795	196	2	37	2,500 00	14,280 00
Flushing	Genesee	282	8,000	1,875 00	43 75	30 00	2,218 57	.....	184	197	2	3	975 00	900 00
Ford River	Delta	182	2,146	822 50	.....	45 69	3,210 25	1,589 03	102	200	.....	3	.....	822 50
Forestville	Sanilac	178	1,000	408 00	35 00	22 00	622 25	.....	95	180	1	1	210 00	198 00
Fort Gratiot	St. Clair	662	8,000	3,150 00	100 00	35 83	5,089 02	125 00	540	196	1	6	1,000 00	2,150 00
Fowler	Clinton	112	1,800	742 50	50 00	33 50	885 41	.....	93	180	1	1	450 00	292 50

GRADED SCHOOL STATISTICS.

Howlerville.....	200	2,500	2,548 00	70 00	29 49	2,105 70	.....	818	200	1	0	700 00	1,048 00
Frankfort.....	439	5,530	3,337 50	99 00	34 33	5,247 43	161 39	256	200	1	3	990 00	2,337 50
Franklin Tp. No. 1.....	309	1,200	750 00	.....	37 50	946 79	.....	128	196	.....	2	900 00	1,000 00
Franklin Tp. No. 2.....	273	4,000	1,900 00	90 00	50 00	4,933 87	.....	176	193	1	1	1,200 00	450 00
Franklin Tp. No. 3.....	271	2,500	1,750 00	65 00	45 00	2,347 07	.....	215	193	2	1	450 00	299 50
Freeland.....	130	2,500	719 50	45 00	23 35	839 00	.....	100	197	1	1	160 00	357 50
Freeport.....	147	1,200	517 50	40 00	27 50	571 00	.....	124	180	1	4	800 00	1,150 00
Fremont.....	477	5,000	1,950 00	80 00	23 75	2,604 19	.....	343	200	1	4	800 00	211 25
Fruitport.....	110	3,000	634 75	53 94	23 40	878 73	.....	68	180	1	1	423 50	919 20
Galesburg.....	178	10,000	1,628 20	59 08	30 64	2,065 87	.....	203	180	2	4	709 00	810 00
Gallen.....	191	5,000	1,410 00	66 66	30 00	1,770 09	.....	161	173	1	3	600 00	820 00
Garden.....	307	4,000	1,120 00	50 00	40 00	1,533 83	3,240 00	195	160	2	1	800 00	815 00
Gaylord.....	193	2,500	1,080 00	41 94	35 00	1,672 90	.....	130	175	2	1	735 00	225 00
Girard.....	93	2,500	585 00	40 00	25 00	703 46	.....	79	173	1	1	360 00	495 00
Gobleville.....	169	1,500	971 13	52 90	27 50	1,137 25	.....	113	180	1	2	476 13	187 50
Goodrich.....	104	2,000	687 50	50 00	26 78	737 03	.....	76	200	1	1	500 00	650 00
Graefschap.....	213	2,600	650 00	.....	37 50	1,800 86	50 00	154	193	.....	2	.....	8,072 50
Grand Haven.....	1,744	50,000	9,532 50	76 00	35 10	17,233 59	.....	1,376	200	2	23	1,520 00	810 00
Grand Ledge.....	244	10,000	1,510 00	77 77	30 00	4,512 73	8,233 00	251	180	1	3	700 00	550 00
Grand Ledge No. 11, Fl.....	239	10,000	870 00	40 00	27 50	3,923 17	5,671 91	233	160	1	3	320 00	97,335 24
Grand Rapids.....	15,123	632,500	107,440 24	139 20	49 53	193,231 92	202,000 00	9,253	193	3	193	9,305 00	1,330 00
Grand Rapids No. 1.....	667	13,000	2,780 00	95 00	31 02	5,131 09	14,500 00	336	200	1	6	950 00	1,444 25
Grand Rapids No. 6.....	341	2,500	1,444 25	.....	33 10	2,649 14	.....	197	200	.....	6	.....	550 00
Grand Rapids No. 15.....	444	3,500	1,150 00	60 00	27 50	2,242 27	2,950 00	210	200	1	2	600 00	1,080 00
Grandville.....	239	10,000	1,800 00	80 00	32 05	2,233 01	.....	236	200	1	4	800 00	1,170 00
Grass Lake.....	193	3,000	2,250 00	108 00	29 25	3,335 14	.....	165	195	1	4	1,080 00	232 50
Grattan.....	91	2,000	742 50	50 00	32 50	830 53	.....	90	173	1	2	450 00	1,160 00
Grayling.....	235	5,900	2,100 00	100 00	26 06	4,464 10	1,500 00	200	209	1	3	1,000 00	.....

SUPERINTENDENT'S REPORT.

TABLE XVIII.—Continued.

Districts.	Counties.	No. of children between 5 and 20 years.	Estimated valuation of school property.	Amount paid for maintenance and instruction.	Average monthly wages of teachers.		Total expenditures.	Total indebtedness.	No. of children that attended school during the year.	No. of days of school.	No. of teachers employed.		Total wages of teachers for the year.	
					Men.	Women.					Men.	Women.	Men.	Women.
Green	Alpena.....	134	\$1,175	\$477 50	\$35 00	\$31 04	\$702 40	.....	77	200	1	2	\$105 00	\$373 50
Greenland No. 2, fl.....	Ontonagon	67	600	1,050 00	70 00	35 00	1,372 53	.....	43	200	1	1	700 00	350 00
Greenville.....	Montcalm	893	40,000	7,916 50	73 33	39 76	10,457 74	.....	901	200	3	14	2,350 00	5,566 50
Grindstone City.....	Huron.....	239	3,000	1,103 00	65 00	25 33	1,987 49	\$525 00	174	197	1	2	650 00	456 00
Grosse Isle.....	Wayne.....	222	2,000	1,350 00	55 00	26 66	1,633 95	.....	140	200	1	3	550 00	800 00
Hadley.....	Lapeer.....	109	2,000	890 00	58 30	23 30	1,068 90	.....	106	173	1	2	525 00	265 00
Hamilton	Allegan.....	124	1,800	435 75	40 00	20 70	1,129 54	400 00	83	160	1	1	320 00	163 75
Hamtramck Tp. No. 2	Wayne.....	235	5,000	850 00	50 00	35 00	1,684 87	3,710 00	150	196	1	1	500 00	350 00
Hancock.....	Houghton	1,192	23,000	7,037 50	120 00	45 46	13,704 43	12,000 00	900	196	2	10	2,400 00	4,637 50
Hanover	Jackson.....	153	9,000	1,850 00	75 00	36 60	2,203 94	100 00	130	193	1	4	750 00	1,100 00
Harbor Springs	Emmet.....	232	4,000	1,514 00	72 00	32 00	2,417 65	525 00	234	180	1	3	650 00	884 00
Harrison	Clare.....	257	3,300	1,633 00	70 00	33 30	2,918 48	17 00	219	195	1	3	700 00	1,000 00
Harrisville	Alcona.....	307	4,000	1,690 00	65 00	33 10	2,541 38	960 06	239	200	1	3	650 00	1,080 00
Hart	Oceana.....	233	2,500	1,555 00	77 70	31 60	1,900 05	.....	190	180	1	3	700 00	855 00
Hartford.....	Van Buren.....	344	3,500	1,934 00	77 70	35 10	2,593 22	.....	301	173	1	4	700 00	1,284 00
Hartland	Livingston	90	2,500	531 00	45 00	29 50	731 53	.....	100	180	1	1	315 00	266 00
Hastings.....	Barry	841	40,000	5,007 50	65 00	33 65	9,124 81	11,500 00	849	199	2	11	1,300 00	3,707 50
Hersey.....	Osceola.....	165	4,000	1,300 00	70 00	30 00	2,002 03	750 00	139	194	1	2	700 00	600 00
Hesperia.....	Newaygo.....	275	4,000	1,274 50	51 83	33 30	1,560 37	101 83	247	180	2	2	674 50	600 00
Highland Station.....	Oakland	143	1,500	740 00	50 00	24 00	835 53	104	200	1	1	500 00	240 00

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Hilledale	1,070	51,000	8,069 54	105 00	37 69	17,733 26	10,000 00	891	190	2	17	2,000 00	6,069 50
Holland	1,207	26,000	5,716 37	125 00	36 44	17,153 67	18,000 00	1,055	196	1	15	1,950 00	4,466 37
Holland Tp. No. 1, d.	123	800	406 00	44 00	47 30	451 43	13 46	96	200	1	1	204 00	143 00
Holland Tp. No. 2	99	1,300	596 00	50 00	16 00	657 61	.....	81	200	1	1	500 00	96 00
Holly	372	15,000	8,000 00	100 00	33 30	8,914 35	1,800 00	400	200	1	7	1,000 00	2,000 00
Holt	147	1,800	703 00	48 00	30 00	1,504 66	339 29	105	177	1	1	422 00	270 00
Homer	305	8,500	2,250 00	53 60	33 20	2,784 71	.....	259	183	8	5	320 00	1,430 00
Horton	117	4,000	848 00	55 50	23 70	1,444 14	.....	94	176	1	2	500 00	848 00
Houghton	982	40,000	8,160 00	95 00	44 70	14,674 69	.....	533	200	2	14	1,900 00	6,260 00
Howard City	308	4,500	2,042 50	72 50	34 70	3,087 07	1,500 00	231	196	2	5	725 00	1,317 50
Howell	616	30,000	4,620 00	100 00	32 90	14,368 51	8,220 00	633	200	1	11	1,000 00	3,620 00
Hubbardston	171	4,500	990 00	.....	26 60	1,369 65	.....	133	130	.....	3	.....	990 00
Hudson	400	10,000	3,354 75	100 00	35 60	4,563 53	.....	347	187	1	7	1,000 00	2,354 75
Hudson Tp. No. 5	251	4,000	1,764 00	100 00	32 00	2,180 86	.....	172	180	1	3	900 00	864 00
Humboldt	130	3,000	1,110 00	75 00	40 00	1,752 82	76 32	90	195	1	1	750 00	360 00
Ida	111	1,500	384 00	40 00	24 00	523 74	158 00	73	180	1	1	300 00	120 00
Imlay City	514	8,500	3,242 50	90 00	29 64	7,101 45	9,184 41	453	200	1	8	900 00	2,342 50
Inverness Tp. No. 3, d.	224	1,200	1,000 00	65 00	35 00	1,225 13	.....	133	190	1	1	650 00	350 00
Ionia	1,333	56,000	11,680 00	73 70	41 38	19,961 62	8,636 67	1,049	195	4	21	2,950 00	8,780 00
Iron Mountain	1,053	19,000	7,439 50	120 00	46 00	14,129 99	4,500 00	931	200	1	15	1,200 00	6,239 50
Iron River	202	4,000	1,610 00	75 00	45 00	2,634 80	.....	202	197	1	2	750 00	360 00
Ironton	160	3,000	630 00	40 00	30 00	857 19	.....	94	178	1	1	300 00	270 00
Ironwood	1,033	35,000	6,065 00	118 00	53 20	24,335 72	15,000 00	605	209	2	8	1,890 00	4,060 00
Ishpeming	2,372	57,000	11,088 75	151 00	43 96	19,833 27	25,000 00	1,604	195	2	18	2,275 00	8,813 75
Ishpeming Tp. No. 1	130	1,200	1,000 00	60 00	40 00	1,196 06	.....	111	194	1	1	600 00	400 00
Ithaca	524	30,000	3,423 50	110 00	33 17	7,337 28	13,000 00	532	200	1	7	1,100 00	2,332 50
Jackson No. 1	2,316	150,000	22,195 70	160 00	47 46	47,265 99	14,000 00	2,002	195	2	40	3,200 00	13,995 70
Jackson No. 17	2,507	55,000	9,131 33	150 00	36 60	13,619 31	68 62	1,496	196	1	21	1,500 00	7,700 00

TABLE XVIII.—Continued.

Districts.	Counties.	No of children between 5 and 20 years.	Estimated valuation of school property.	Amount paid for instruction.	Average monthly wages of teachers.		Total expenditures.	Total indebtedness.	No. of children that attended school during the year.	No. of days of school.	No. of teachers employed.		Total wages of teachers for the year.	
					Men.	Women.					Men.	Women.	Men.	Women.
Jacobsville	Houghton.....	105	\$500	\$428 27	.....	\$25 68	\$1,072 61	\$1,000 00	100	200	.....	8	.....	\$428 27
Jamestown	Ottawa.....	120	8,000	493 50	\$50 00	31 10	1,340 12	1,500 00	83	159	1	1	\$400 00	98 50
Jonesville.....	Hillsdale.....	464	40,000	2,840 00	100 00	36 80	4,612 65	.....	318	200	1	5	1,000 00	1,840 00
Kalamazoo	Kalamazoo	5,009	200,000	28,422 70	210 00	37 08	55,199 69	12,000 00	3,014	194	2	60	4,200 00	22,222 70
Kalamo	Eaton.....	116	200	497 50	37 50	21 94	560 80	.....	89	170	2	3	300 00	197 50
Kalkaska	Kalkaska.....	350	9,000	2,110 00	94 00	35 00	3,867 30	5,200 00	271	180	1	4	850 00	1,200 00
Kendall.....	Van Buren.....	99	1,500	525 00	42 80	22 20	665 44	.....	77	160	1	2	339 00	186 00
Kingsley.....	G'd Traverse..	164	1,000	765 00	50 00	35 00	1,141 60	200 00	133	177	1	1	450 00	315 00
Kingston.....	Tuscola.....	146	1,200	612 00	40 00	28 00	1,025 01	200 00	96	180	1	1	380 00	253 00
Laingsburg.....	Shlawassee ..	203	4,500	1,720 00	73 00	32 80	2,678 65	.....	208	196	1	3	750 00	970 00
Lake Linden.....	Houghton.....	1,812	12,000	8,287 50	140 00	45 50	12,578 76	.....	909	198	1	18	1,400 00	6,887 50
Lakeview	Montcalm.....	343	8,000	1,950 00	70 00	31 00	2,431 89	.....	234	200	1	4	700 00	1,250 00
Lamont	Ottawa.....	95	1,800	580 00	.....	41 49	704 00	35 00	87	177	.....	2	.....	580 00
L'Anse.....	Baraga.....	318	10,000	2,600 00	100 00	40 00	4,714 06	.....	229	200	1	5	1,000 00	1,600 00
Lansing.....	Ingham	3,049	100,000	18,241 87	136 00	44 56	26,811 98	51,000 00	2,075	190	2	37	2,600 00	15,641 87
Lapeer.....	Lapeer.....	863	22,000	6,000 00	85 00	30 70	8,488 85	.....	870	197	2	14	1,700 00	4,300 00
Lawrence.....	Van Buren.....	180	9,000	1,528 00	77 70	30 60	1,888 13	.....	126	180	1	3	700 00	828 00
Lawton	Van Buren.....	220	12,000	1,498 00	70 00	28 50	2,120 07	.....	237	190	1	3	700 00	798 00
Lealie	Ingham	378	15,000	2,760 00	95 00	30 10	3,611 00	.....	406	200	1	6	950 00	1,810 00
Lexington	Sanilac.....	291	8,000	1,900 00	80 00	27 50	2,265 29	241	200	1	4	800 00	1,100 00

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Leroy	Osceola	213	1,000	1,006 00	46 60	28 50	1,446 13	150	180	1	2	490 00	585 00
Linden	Genesee	173	4,500	990 00	60 00	26 00	2,303 39	125	176	1	2	540 00	450 00
Lisbon	Ottawa	95	2,400	810 00	60 00	30 00	923 55	.....	97	179	1	1	540 00	270 00
Litchfield	Hillsdale	200	2,000	1,491 00	150 00	24 70	1,922 66	.....	229	172	1	5	600 00	891 00
Long Rapids	Alpena	304	3,500	1,728 00	32 50	30 50	2,613 50	.....	214	160	1	9	280 00	1,468 00
Lowell	Kent	305	13,500	3,556 50	54 00	30 95	3,645 41	.....	529	200	2	9	1,080 00	2,476 50
Dudington	Mason	2,179	85,000	13,104 00	85 10	37 68	53,495 93	51,000 00	1,702	196	3	28	2,550 00	10,554 00
Luther	Lake	461	8,000	2,700 00	80 00	33 00	3,473 80	.....	331	198	1	5	800 00	1,940 00
Lyons	Ionla	200	2,500	1,551 00	72 20	33 30	1,573 96	.....	147	180	1	3	650 00	901 00
Mackinac City	Cheboygan	112	3,000	675 00	50 00	25 00	1,237 69	748 00	88	175	1	1	450 00	225 00
McBrides	Montcalm	240	2,000	1,115 00	50 00	30 00	1,397 46	.....	174	176	1	2	575 00	540 00
Mackinac Island	Mackinac	194	2,500	1,065 00	70 00	35 00	1,443 41	.....	144	156	1	2	560 00	526 00
Mancelona	Antrim	424	3,000	2,250 00	80 00	28 30	3,234 97	2,000 00	405	180	1	6	720 00	1,530 00
Manchester	Washtenaw	427	25,000	3,162 50	83 65	32 98	4,347 96	.....	366	200	2	8	886 50	2,276 00
Manistee	Manistee	3,751	84,000	18,599 05	94 50	41 13	33,883 03	29,000 00	1,984	197	6	36	4,070 00	14,519 05
Manistique	Schoolcraft	516	4,000	3,900 00	100 00	43 30	3,300 49	25 43	488	196	1	6	1,000 00	2,900 00
Manton	Wexford	276	10,000	1,296 00	57 00	28 00	3,361 95	8,000 00	216	200	1	3	570 00	728 00
Maple Rapids	Clinton	208	3,000	1,444 00	43 20	29 00	1,801 76	.....	220	200	2	2	864 00	580 00
Marcellus	Cass	200	7,500	1,200 00	43 30	33 30	2,051 60	2,000 00	160	170	2	2	600 00	600 00
Marine City	St. Clair	974	15,000	2,760 00	81 00	27 80	4,523 72	59 00	403	195	1	7	810 00	1,950 00
Marlette	Sanilac	262	3,000	1,510 00	65 00	23 60	1,944 99	.....	247	200	1	3	650 00	860 00
Marquette	Marquette	2,370	60,000	12,755 00	100 00	43 30	21,569 10	41,027 82	1,360	200	2	22	2,010 00	10,745 00
Marshall	Calhoun	1,230	100,000	9,727 50	125 00	35 60	13,673 75	.....	741	194	2	21	2,500 00	7,227 50
Marysville	St. Clair	133	2,500	630 00	.....	35 00	767 82	4 85	114	172	.....	2	.....	630 00
Mason	Ingham	539	13,000	4,192 00	70 00	34 30	6,424 07	.....	539	200	2	8	1,400 00	2,793 00
Mattawan	Van Buren	107	3,000	472 50	40 00	23 12	559 25	.....	84	180	1	1	360 00	112 50
May	Tuscola	228	3,000	1,043 75	50 00	27 13	1,436 03	5,000 00	169	200	1	2	500 00	543 75
Mecosta	Mecosta	235	3,000	1,227 50	53 50	32 50	1,353 80	.....	152	180	2	1	945 00	293 50

TABLE XVIII.—Continued.

Districts.	Counties.	No. of children between 5 and 20 years.	Estimated valuation of school property.	Amount paid for salaries and instruction.	Average monthly wages of teachers.		Total expenditures.	Total indebtedness.	No. of children that attended school during the year.	No. of days of school.	No. of teachers employed.		Total wages of teachers for the year.	
					Men.	Women.					Men.	Women.	Men.	Women.
Memphis.....	Macomb.....	258	\$5,000	\$1,160 00	\$60 00	\$28 00	\$1,766 59	\$35 00	200	194	1	2	\$600 00	\$500 00
Mendon.....	St. Joseph.....	215	1,200	2,175 00	80 00	36 10	2,391 22	.....	197	190	1	4	800 00	1,375 00
Menominee.....	Menominee.....	2,382	45,000	11,625 00	160 00	44 00	20,896 83	9,000 00	1,218	196	1	23	1,500 00	10,125 00
Metamora.....	Lapeer.....	169	3,500	963 00	55 00	26 00	1,172 03	.....	141	178	1	2	495 00	468 00
Michigamme.....	Marquette.....	370	7,500	2,023 25	45 18	26 12	2,952 05	.....	332	195	2	2	1,203 75	722 50
Middleville.....	Barry.....	226	1,400	1,600 00	50 00	30 00	4,232 82	.....	200	200	2	2	1,000 00	600 00
Midland Tp. No. 3.	Midland.....	705	37,200	5,165 00	115 00	40 60	21,278 74	1,200 00	592	200	1	9	1,150 00	4,015 00
Midland Tp. No. 6.	Midland.....	133	2,000	600 00	.....	39 50	866 18	.....	121	160	.....	2	.....	600 00
Milan.....	Washtenaw.....	815	3,500	1,493 00	66 60	25 30	2,626 34	.....	255	180	1	5	600 00	888 00
Milford.....	Oakland.....	386	16,000	2,170 00	80 00	27 40	3,957 08	7,500 00	306	196	1	5	800 00	1,370 00
Millburg.....	Berrien.....	109	2,500	640 00	55 00	25 00	774 73	.....	80	160	1	1	440 00	200 00
Millington.....	Tuscola.....	220	6,500	1,428 60	60 00	27 63	2,545 26	5,000 00	177	200	1	3	600 00	828 60
Minden City.....	Sanilac.....	185	2,000	620 00	40 00	22 00	876 50	588 50	140	200	1	1	400 00	220 00
Montague.....	Muskegon.....	527	20,000	3,596 88	70 00	37 81	6,366 87	2,650 00	492	200	2	6	1,400 00	2,196 88
Monroe.....	Monroe.....	1,972	30,000	4,350 00	120 00	33 18	20,378 73	9,180 00	556	196	1	11	1,200 00	3,650 00
Morenci.....	Lenawee.....	330	12,000	2,339 43	88 10	29 60	3,304 50	243 69	286	176	1	6	775 00	1,602 00
Morrice.....	Shiawassee.....	175	6,000	1,080 00	50 00	29 00	1,484 39	3,000 00	150	200	1	2	500 00	580 00
Morley.....	Mecosta.....	195	1,800	1,022 50	67 00	26 25	1,267 22	.....	183	196	1	2	670 00	352 50
Mt. Clemens.....	Macomb.....	1,400	27,300	5,074 00	66 00	36 09	6,827 47	.....	740	196	2	14	1,320 00	3,754 00
Mt. Morris.....	Genesee.....	161	2,000	702 00	50 00	28 00	817 02	113	178	1	1	450 00	252 00

GRADED SCHOOL STATISTICS.

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Mt. Pleasant.....	791	12,000	4,150 00	90 00	26 00	6,901 30	10,000 00	554	200	1	10	1,000 00	2,150 00
Muir.....	189	7,300	1,275 00	77 00	25 00	2,359 99	535 00	191	180	1	4	700 00	675 00
Muskegon.....	6,822	100,000	33,808 77	111 00	44 04	89,009 78	17,941 69	4,238	210	4	78	4,460 00	84,352 77
Napoleon.....	119	5,000	1,376 50	54 10	83 00	1,581 96	.....	100	188	2	2	757 50	619 00
Nashville.....	819	11,000	2,305 00	76 00	30 90	6,068 68	2,800 00	230	200	1	5	760 00	1,545 00
National Mine.....	297	5,000	1,350 00	90 00	47 50	2,702 45	1,160 00	159	196	2	8	900 00	950 00
Negaunee.....	2,089	45,000	7,583 50	160 00	44 65	20,348 15	80,000 00	934	192	1	14	1,600 00	5,968 50
Newbygo.....	415	5,000	2,276 00	90 00	34 40	3,491 83	74 00	262	193	1	4	900 00	1,378 00
New Boston.....	141	2,000	275 94	25 13	20 00	330 36	9 06	100	160	2	1	175 94	100 00
New Baltimore.....	335	22,000	1,160 00	60 00	23 00	1,358 39	.....	127	200	1	2	600 00	560 00
New Buffalo.....	230	4,000	1,335 00	60 00	31 66	1,690 01	.....	175	160	1	3	490 00	855 00
Newbury.....	246	5,500	1,650 00	75 00	45 00	2,841 20	8,000 00	151	200	1	2	750 00	900 00
New Haven.....	246	1,500	1,030 00	50 00	23 50	1,333 14	.....	204	200	1	2	500 00	530 00
New Holland.....	191	1,000	713 75	50 09	21 37	852 37	.....	120	200	1	1	500 00	213 75
New Hudson.....	75	4,000	480 00	40 00	20 00	563 34	.....	53	180	1	1	360 00	120 00
New Troy.....	123	4,000	509 50	55 00	17 95	802 49	.....	95	200	1	1	330 00	179 50
Niles.....	1,187	50,000	9,665 00	127 00	30 90	16,106 18	.....	904	180	2	20	2,300 00	7,365 00
North Adams.....	183	10,000	1,500 00	64 40	33 33	2,015 64	.....	210	180	1	3	600 00	900 00
North Branch.....	279	10,000	1,400 00	60 00	23 60	7,574 81	7,000 00	219	197	1	3	600 00	800 00
North Muskegon.....	853	2,000	3,379 75	64 61	40 94	6,021 03	5,000 00	520	200	3	6	1,496 25	1,883 50
Northport.....	203	2,000	977 50	.....	37 59	1,179 09	.....	132	180	.....	5	.....	977 50
Northville.....	425	18,000	2,390 00	80 00	27 19	3,233 59	.....	205	200	1	6	800 00	1,590 00
Norway.....	642	9,000	4,330 00	100 00	47 70	6,354 15	.....	537	200	1	8	1,000 00	3,390 00
Nunica.....	153	2,500	775 00	63 12	27 00	1,214 33	.....	106	180	1	2	505 00	270 00
Okemos.....	144	2,000	629 00	45 50	23 30	866 70	.....	122	176	3	2	365 00	255 00
Olivet.....	232	7,000	1,356 00	60 00	31 30	3,495 92	3,800 00	221	180	1	3	540 00	316 00
Onakama.....	182	2,000	675 00	.....	37 50	1,246 79	800 00	120	180	.....	2	.....	675 00
Onondaga.....	126	1,000	630 00	50 00	20 00	959 04	.....	88	180	1	1	450 00	180 00

SUPERINTENDENT'S REPORT.

TABLE XVIII.—Continued.

Districts.	Counties.	No. of children between 5 and 20 years.	Estimated valuation of school property.	Amount paid for maintenance and instruction.	Average monthly wages of teachers.		Total expenditures.	Total indebtedness.	No. of children that attended school during the year.	No. of days of school.	No. of teachers employed.		Total wages of teachers for the year.	
					Men.	Women.					Men.	Women.	Men.	Women.
Ontonagon.....	Ontonagon.....	332	\$5,000	\$2,900 00	\$111 00	\$43 20	\$3,960 86	.....	267	176	1	5	\$1,000 00	\$1,900 00
Opechee.....	Houghton.....	775	.....	4,860 00	105 00	40 70	7,206 04	.....	338	200	1	11	1,060 00	3,300 00
Orion.....	Oakland.....	205	3,500	800 00	50 00	31 00	912 37	.....	185	200	1	1	500 00	300 00
Ortonville.....	Oakland.....	110	3,000	830 00	60 00	23 00	1,082 14	.....	102	200	1	1	600 00	220 00
Oscoda.....	Iosco.....	1,171	10,000	3,779 88	90 00	33 88	7,701 18	\$1,204 36	612	200	1	9	900 00	2,879 88
Osseo.....	Hillsdale.....	118	3,000	462 00	33 80	13 00	576 91	.....	91	180	1	1	300 00	162 00
Otisville.....	Genesee.....	196	4,000	835 00	45 00	21 38	1,103 61	322 50	168	196	1	2	450 00	385 00
Otsego.....	Allegan.....	441	10,000	2,804 00	105 00	38 10	3,368 13	.....	436	180	1	6	960 00	1,854 00
Otter Lake.....	Lapeer.....	154	1,200	736 50	55 00	26 83	834 52	.....	148	180	1	2	495 00	241 50
Overlall.....	Allegan.....	136	2,000	438 00	32 00	26 00	877 10	.....	110	180	1	1	288 00	150 00
Ovid.....	Clinton.....	400	20,000	3,220 00	100 00	31 70	4,299 49	.....	435	200	1	7	1,000 00	2,220 00
Owosso.....	Shiawassee.....	1,628	64,000	11,340 00	69 30	37 50	21,539 46	.....	1,328	193	5	21	3,466 00	7,874 00
Oxford.....	Oakland.....	323	14,000	1,925 00	72 50	30 00	8,445 95	9,000 00	288	200	1	4	725 00	1,200 00
Palmyra.....	Lenawee.....	143	3,000	633 75	45 00	24 30	744 05	.....	95	175	1	2	405 00	213 75
Palo.....	Ionia.....	89	4,000	1,110 00	60 00	30 00	1,419 82	.....	98	197	1	2	600 00	510 00
Paris.....	Mecosta.....	103	1,200	713 25	45 25	33 00	861 20	9 37	84	180	1	1	425 25	288 00
Paris Tp. No. 1.....	Kent.....	129	1,200	580 60	45 00	25 00	815 73	185 00	99	180	1	1	405 00	175 00
Parma.....	Jackson.....	208	15,000	1,756 00	70 00	32 00	3,035 12	.....	227	200	1	4	700 00	1,056 00
Paw Paw.....	Van Buren.....	245	40,000	3,944 00	120 00	34 30	7,641 23	2,160 00	381	200	1	8	1,200 00	2,744 00
Pentwater.....	Oceana.....	576	10,000	2,651 50	63 25	34 68	5,074 78	.....	391	196	3	6	1,235 00	1,386 50

GRADED SCHOOL STATISTICS.

Pequaming..	Baraga.....	123	.....	1,134 00	.....	53 70	1,533 90	.....	86	193	.....	2	.....	1,134 00
Perry	Shiawassee	169	4,000	1,315 00	55 00	30 00	2,775 69	.....	163	200	2	2	715 00	600 00
Petokey.....	Emmet	729	10,000	4,935 00	105 00	33 20	6,877 49	8,500 00	619	200	1	11	1,050 00	3,915 00
Petersburg.....	Monroe	203	9,000	1,153 00	50 00	26 00	1,499 27	.....	183	176	1	8	450 00	702 00
○ Pewamo	Ionia.....	121	1,000	1,098 00	60 00	31 00	1,353 65	.....	126	176	1	2	540 00	553 00
Plerson	Montcalm.....	150	2,000	675 00	45 00	30 00	760 45	.....	123	180	1	1	405 00	270 00
Pinckney	Livingston.....	203	8,000	1,201 25	53 63	33 25	2,822 09	6,000 00	189	200	1	2	536 25	665 00
Pinconning.....	Bay	287	4,000	1,300 00	60 00	35 00	2,689 96	1,500 00	204	197	1	2	600 00	700 00
Pinnebog	Huron	194	1,600	720 00	55 00	23 20	818 59	.....	141	200	1	1	550 00	180 00
Plainwell	Allegan	438	16,000	3,043 00	100 00	70 00	5,083 09	123 60	410	177	1	8	900 00	2,142 00
Plymouth	Wayne.....	407	15,000	3,075 00	100 00	32 90	5,541 05	6,000 00	304	200	1	6	1,000 00	2,075 00
Pontiac	Oakland	1,232	30,000	11,690 00	102 00	33 00	15,575 60	.....	1,083	200	4	20	4,090 00	7,600 00
Port Austin.....	Huron.....	375	4,000	1,400 00	30 00	30 00	1,742 88	.....	136	199	1	2	800 00	600 00
Port Crescent	Huron.....	117	3,500	555 00	45 00	25 00	610 11	.....	103	176	1	1	405 00	150 00
Port Hope	Huron.....	273	2,500	925 00	60 00	32 50	1,123 44	.....	150	192	1	1	600 00	325 00
Port Huron	St. Clair	3,988	103,900	16,575 00	125 00	39 00	23,972 73	14,500 00	2,332	196	2	26	2,500 00	14,075 00
Portland.....	Ionia.....	472	17,000	4,280 00	100 00	35 00	8,263 00	4,800 00	517	190	1	10	1,000 00	3,280 00
Port Sanilac.....	Sanilac.....	222	2,000	999 00	60 00	25 50	1,250 55	1,200 00	154	180	1	2	540 00	459 00
Potterville.....	Eaton	209	4,000	986 50	48 04	25 50	1,293 74	.....	180	176	2	3	523 50	453 00
Powers.....	Menominee.....	231	2,800	1,000 00	65 00	35 00	1,734 81	654 62	136	197	1	1	650 00	350 00
Quincy.....	Branch.....	310	10,000	2,870 00	53 50	34 00	4,373 87	.....	300	200	2	5	1,170 00	1,700 00
Quincy Tp. No. 1.....	Houghton.....	514	.....	2,350 00	100 00	45 00	3,120 38	.....	229	196	1	3	1,000 00	1,350 00
Quinnesec.....	Menominee.....	153	3,000	1,120 00	63 00	40 00	1,714 91	123 37	130	194	1	2	680 00	440 00
Ransom	Hilledale.....	88	1,200	353 75	52 30	20 17	405 95	.....	80	160	2	2	157 00	201 75
Ravenna.....	Muskegon.....	123	2,000	702 00	50 00	23 00	1,033 04	400 00	138	180	1	1	459 00	252 00
Reading.....	Hilledale.....	249	8,000	1,914 00	31 60	32 40	3,570 01	1,200 00	135	180	2	5	735 00	1,179 00
Reed City.....	Osceola	721	10,000	3,230 00	64 00	33 30	5,221 66	1,200 00	595	200	2	6	1,230 00	2,000 00
Reese.....	Tuscola	228	2,000	675 00	45 00	30 00	835 04	.....	171	172	1	1	405 00	270 00

SUPERINTENDENT'S REPORT.

TABLE XVIII.—Continued.

Districts.	Counties.	No. of children between 5 and 20 years.	Estimated valuation of school property.	Amount paid for superintendence and instruction.	Average monthly wages of teachers.		Total expenditures.	Total indebtedness.	No. of children that attended school during the year.	No. of days of school.	No. of teachers employed.		Total wages of teachers for the year.	
					Men.	Women.					Men.	Women.	Men.	Women.
Republic.....	Marquette.....	734	\$13,000	\$4,907 75	\$140 00	\$50 11	\$7,815 14	.....	546	196	1	7	\$1,400 00	\$3,507 75
Richland.....	Kalamazoo.....	126	5,500	1,426 00	80 00	30 26	2,307 78	\$1,075 00	144	195	1	2	800 00	625 00
Richmond.....	Macomb.....	233	8,000	1,895 00	75 00	26 60	2,380 86	1,200 00	201	178	1	3	675 00	720 00
Ridgeway.....	Lenawee.....	72	2,500	650 00	44 40	27 70	700 66	.....	68	180	1	1	400 00	250 00
Rochester.....	Oakland.....	296	.....	1,810 00	85 00	32 00	2,413 69	.....	242	200	1	3	850 00	900 00
Rockford.....	Kent.....	288	20,000	1,944 32	55 00	23 45	4,220 15	6,000 00	285	200	2	4	1,100 00	844 32
Rockland.....	Ontonagon.....	292	3,000	2,900 00	126 90	65 70	3,607 96	.....	160	130	2	3	1,650 00	1,250 00
Rogers City.....	Presque Isle.....	218	3,000	889 80	45 40	31 00	2,944 13	5,000 00	155	180	4	2	590 80	279 00
Romeo.....	Macomb.....	530	25,000	3,900 00	150 09	34 20	10,160 12	4,240 00	459	300	1	7	1,500 00	2,400 00
Roscommon.....	Roscommon.....	138	1,000	765 00	.....	42 50	1,017 09	.....	124	180	.....	2	.....	765 00
Royal Oak.....	Oakland.....	163	2,500	635 00	47 20	30 00	824 86	.....	116	140	2	1	425 00	210 00
Ryerson.....	Muskegon.....	435	3,500	2,830 00	90 00	34 46	4,956 64	.....	334	200	1	7	900 00	1,930 00
Saginaw.....	Saginaw.....	5,196	128,522	23,010 94	102 00	35 32	59,835 94	22,000 00	2,916	200	5	50	5,100 00	17,910 94
St. Charles.....	Saginaw.....	303	7,000	1,668 75	75 00	26 34	3,951 68	2,000 00	169	200	1	3	759 00	918 75
St. Clair.....	St. Clair.....	752	25,000	4,702 50	67 50	33 55	7,842 36	7,750 00	619	196	2	11	1,350 00	3,352 50
St. Ignace.....	Mackinac.....	917	15,000	3,793 10	55 69	30 32	9,123 64	12,900 00	539	197	3	7	1,670 75	2,122 25
St. James.....	Manitou.....	159	600	150 00	40 00	28 00	223 21	850 00	56	138	1	1	80 00	140 00
St. Johns.....	Clinton.....	907	39,000	6,080 00	120 09	34 86	11,335 36	19,600 00	725	194	1	14	1,200 00	4,890 00
St. Joseph.....	Berrien.....	1,201	45,000	5,515 00	73 06	37 84	11,736 59	9,000 00	800	200	2	12	1,315 00	4,200 00

GRADED SCHOOL STATISTICS.

CXV

St. Louis.....	765	12,000	4,409 61	98 23	81 06	7,336 78	5,000 00	621	186	3	12	1,180 00	8,260 61
Salem	103	1,400	439 25	26 80	18 00	836 40	500 00	92	180	3	1	331 25	108 00
Saline.....	280	25,000	2,580 00	90 00	33 60	8,881 14	55 00	146	300	1	5	900 00	1,680 00
Sand Beach.....	307	5,500	2,500 00	33 50	33 50	8,431 74	1,254 71	309	200	1	5	825 00	1,675 00
Sand Lake.....	163	2,500	898 75	50 00	24 98	1,449 62	250 00	150	180	1	2	450 00	448 75
Sanilac Tp. No. 2.....	114	1,500	480 00	40 00	20 00	606 55	.....	71	200	1	1	400 00	80 00
Saranac.....	300	12,000	1,950 00	70 00	31 25	2,505 57	.....	253	200	1	4	700 00	1,250 00
Saugatuck.....	333	8,000	1,627 00	72 22	28 25	2,315 26	.....	348	180	1	4	650 00	1,017 00
Sault Ste. Marie.....	1,548	30,000	5,334 00	86 23	38 20	10,663 08	8,000 00	905	200	2	11	1,552 00	3,732 00
Schoolcraft.....	290	24,000	2,542 00	94 44	37 60	8,699 37	.....	265	180	1	5	850 00	1,632 00
Sebewaing.....	352	3,000	850 00	60 00	25 00	1,153 45	.....	127	200	2	1	600 00	250 00
Shafterburg	80	1,550	547 50	45 00	30 88	924 82	535 00	76	177	1	1	270 00	277 50
Shelby	280	3,500	1,365 00	65 00	32 08	2,106 34	104 50	189	177	1	3	535 00	770 00
Shepherd	192	2,200	851 75	50 00	28 28	1,642 79	87 00	150	160	1	3	400 00	451 75
Sheridan.....	163	2,000	1,170 00	60 00	35 00	1,277 01	.....	110	177	1	2	540 00	630 00
Sherwood.....	157	2,000	920 00	38 61	25 00	1,119 83	.....	133	180	3	1	685 00	225 00
Somerset Centre.....	75	1,800	264 00	30 00	17 43	403 01	.....	68	180	1	3	120 00	244 00
South Frankfort.....	157	3,500	900 00	55 00	35 00	1,124 14	.....	118	196	1	1	550 00	350 00
South Haven.....	510	7,000	2,974 60	100 00	29 92	5,022 33	.....	415	190	1	7	1,000 00	1,974 60
South Lyon.....	201	4,000	1,384 00	70 00	24 43	2,259 34	1,700 00	161	188	2	3	700 00	684 00
Sparta Centre.....	233	4,500	1,350 00	70 00	37 50	1,597 45	.....	163	200	1	2	700 00	650 00
Spring Lake.....	704	8,500	3,608 20	100 00	34 32	4,203 15	125 00	476	190	1	3	1,000 00	2,608 20
Springport.....	133	4,000	1,450 00	70 00	37 50	1,745 17	.....	113	200	1	2	700 00	750 00
Springwells Tp. No. 1.....	470	7,000	980 00	60 00	31 67	1,767 04	5,500 00	140	200	1	2	600 00	380 00
Springwells Tp. No. 2.....	334	5,000	1,000 00	60 00	40 00	1,637 21	.....	120	194	1	1	600 00	400 00
Springwells Tp. No. 4.....	564	7,000	688 75	45 83	30 89	1,893 86	4,500 00	100	185	1	1	412 50	276 25
Stambaugh	181	3,000	950 00	.....	47 50	1,200 75	800 00	122	195	.....	2	.....	950 00

SUPERINTENDENT'S REPORT.

TABLE XVIII.—Continued.

Districts.	Counties.	No. of children between 5 and 20 years.	Estimated valuation of school property.	Amount paid for maintenance and instruction.	Average monthly wages of teachers.		Total expenditures.	Total indebtedness.	No. of children that attended school during the year.	No. of days of school.	No. of teachers employed.		Total wages of teachers for the year.	
					Men.	Women.					Men.	Women.	Men.	Women.
Standish	Arenac	186	\$3,000	\$308 00	.....	\$37 50	\$2,826 34	\$1,227 00	120	200	.....	2	.....	\$750 00
Stanton	Montcalm	615	7,500	4,402 80	\$30 00	36 11	6,199 49	.....	455	200	1	10	\$300 00	3,502 80
Sterling	Arenac	184	3,200	877 50	50 00	47 50	2,920 58	2,464 00	125	180	1	1	450 00	427 50
Stronach	Manistee	210	2,050	795 00	50 00	38 33	1,146 96	1,024 34	108	175	1	3	450 00	345 00
Stephenson	Menominee	269	2,500	1,205 00	.....	42 27	2,420 80	1,890 00	146	180	.....	3	.....	980 00
Sturgis	St. Joseph	521	35,000	3,957 00	76 00	34 91	5,081 73	.....	403	188	2	8	1,304 00	2,653 00
Summit City	Gd. Traverse	115	1,200	422 00	40 00	30 00	679 61	281 00	106	140	1	1	280 00	210 00
Sumner	Gratiot	137	4,000	775 00	50 00	28 21	1,524 66	535 00	82	180	1	2	450 00	325 00
Sutton's Bay	Leelanaw	186	4,800	724 00	50 00	28 00	961 24	.....	96	200	1	1	500 00	224 00
Tawas City	Iosco	539	7,000	2,200 00	70 00	40 54	3,026 96	2,680 00	268	196	1	4	700 00	1,500 00
Tecumseh	Lenawee	557	42,000	4,950 00	114 54	81 27	9,949 24	4,105 00	504	195	2	13	1,280 00	3,690 00
Tekonaha	Calhoun	176	10,000	1,420 00	77 73	30 00	1,743 88	.....	180	176	1	3	700 00	720 00
Thornville	Lapeer	99	1,800	687 50	55 50	23 50	756 26	.....	83	180	1	1	499 50	188 00
Three Oaks	Berrien	322	6,000	1,784 00	75 00	32 09	2,169 02	.....	271	176	1	4	675 00	1,059 00
Three Rivers No. 1	St. Joseph	516	24,000	4,654 00	125 00	36 21	9,770 98	4,000 00	488	200	1	10	1,250 00	3,404 00
Three Rivers No. 4	St. Joseph	308	7,000	2,080 00	80 00	32 00	4,188 24	1,000 00	243	195	1	4	800 00	1,290 00
Traverse City	Gd. Traverse	1,042	35,000	9,160 00	138 83	46 39	19,051 07	19,000 00	844	180	2	16	2,500 00	6,660 00
Trenton	Wayne	448	2,000	1,200 00	65 00	27 50	1,532 81	.....	301	196	1	2	650 00	550 00
Trufant	Montcalm	152	600	540 00	.....	30 00	812 50	.....	143	180	.....	2	.....	540 00

GRADED SCHOOL STATISTICS.

Tuscola	147	1,000	630 00	60 00	90 00	845 88	.....	134	190	1	1	450 00	180 00
Tuscola	120	1,500	750 00	50 00	35 00	924 97	.....	106	198	2	1	500 00	250 00
Union City.....	497	20,000	4,160 00	100 00	83 11	7,813 68	223 36	413	195	1	9	1,000 00	8,160 00
Unionville.....	194	8,000	970 00	50 00	23 50	1,251 57	.....	151	195	1	2	500 00	470 00
Utica	868	18,000	2,140 00	60 00	31 83	2,865 62	.....	241	200	2	8	1,200 00	940 00
Vandalla.....	150	8,000	1,339 50	66 67	29 58	1,690 11	8,000 00	160	170	1	4	600 00	789 50
Vassar.....	625	24,000	8,540 00	100 00	31 75	6,481 29	2,000 00	474	197	1	8	1,000 00	2,540 00
Vermontville.....	262	8,000	1,593 00	80 00	32 33	1,919 74	.....	246	180	1	8	720 00	873 00
Vernon.....	209	3,000	1,550 00	65 00	30 00	2,178 12	200 00	197	200	1	3	650 00	900 00
Vicksburg	294	7,500	2,188 75	73 64	33 87	3,034 09	600 00	272	186	4	5	663 75	1,524 00
Vriesland.....	159	2,650	780 00	48 00	30 00	1,509 45	850 00	100	200	1	1	480 00	800 00
Vulcan.....	204	3,000	1,750 00	75 00	50 00	3,369 45	750 00	170	194	1	2	750 00	1,000 00
Waldron.....	133	2,000	624 00	48 00	30 00	797 35	.....	98	158	1	1	384 00	240 00
Walker Tp. No. 14.	182	1,500	540 00	.....	30 00	1,363 42	1,680 00	122	180	.....	2	.....	540 00
Washington.....	96	1,500	622 50	39 30	29 83	745 89	.....	94	176	1	1	354 00	268 50
Watervliet	151	2,200	725 00	55 50	25 00	818 28	.....	120	180	1	1	500 00	225 00
Watrousville.....	108	150	545 00	50 00	30 00	607 31	25 00	78	180	1	1	800 00	270 00
Wayland	158	5,000	1,214 94	55 00	20 50	1,879 61	324 00	146	180	1	4	500 00	700 20
Wayne.....	268	20,500	2,300 00	80 00	30 00	4,444 69	4,000 00	850	200	1	5	800 00	1,500 00
Webberville.....	251	2,400	960 00	50 00	23 00	1,121 24	.....	162	195	1	8	500 00	460 00
West Bay City	3,612	70,100	16,000 00	79 00	37 40	36,836 08	29,000 00	2,765	197	4	36	2,690 00	13,310 00
West Branch.....	326	6,500	1,266 76	73 10	39 25	4,222 07	6,301 00	281	170	1	3	511 76	785 00
Wheeler	105	1,800	420 00	33 70	25 00	610 83	1,200 00	100	160	2	1	270 00	150 00
White Cloud.....	220	4,000	1,150 00	50 00	32 50	2,506 33	1,200 00	141	200	1	2	500 00	650 00
Whitehall	623	30,000	3,788 00	100 00	34 80	5,518 62	.....	541	200	1	8	1,000 00	2,738 00
White Pigeon	287	20,000	2,770 00	120 00	32 00	3,602 06	.....	280	200	1	5	1,200 00	1,600 00
White Rock	127	2,000	700 00	55 00	25 00	796 12	.....	95	200	1	1	550 00	150 00

TABLE XVIII.—Continued.

Districts.	Counties.	No. of children between 5 and 20 years.	Estimated valuation of school property.	Amount paid for support and instruction.	Average monthly wages of teachers.		Total expenditures.	Total indebtedness.	No. of children that attended school during the year.	No. of days of school.	No. of teachers employed.		Total wages of teachers for the year.	
					Men.	Women.					Men.	Women.	Men.	Women.
Williamston.....	Ingham.....	435	\$20,000	\$2,186 00	\$70 00	\$32 80	\$6,882 41	\$2,780 43	300	200	1	5	\$700 00	\$1,486 00
Woodland.....	Barry.....	117	8,500	800 00	40 00	.....	1,543 49	500 00	100	200	2	.....	800 00	.....
Worth.....	Arenac.....	168	2,000	400 00	42 50	20 00	1,948 65	1,300 00	108	160	1	1	840 00	60 00
Wyandotte.....	Wayne.....	1,437	50,000	4,270 00	110 00	35 20	7,757 28	.....	508	193	1	9	1,100 00	8,170 00
Ypsilanti.....	Washtenaw.....	1,740	55,000	11,609 38	131 00	36 90	16,174 31	.....	847	200	5	18	5,150 00	6,459 88
Zeeland.....	Ottawa.....	888	4,000	1,380 00	58 00	26 60	1,990 09	.....	316	200	1	3	580 00	800 00
Zilwaukee.....	Saginaw.....	477	6,000	2,200 00	62 50	31 60	2,869 26	.....	343	200	2	3	1,250 00	960 00
Zutphen.....	Ottawa.....	132	1,200	472 50	39 37	.....	643 74	.....	103	160	2	.....	472 50	.....

TABLE XIX.

Financial Statistics of One Hundred and Eighty-nine Graded Schools, as reported by Superintendents and Principals for the School Year 1887-8.

Districts.	Amount paid superin- tendent or principal.	Amount paid regular teachers.	Amount paid special teachers.	Total amount paid for instruction.	Amount paid for inci- dentals.	Total cost of schools.	Cost per capita for in- struction.	Cost per capita for in- cidentals.	Total cost per capita.
Adrian.....	\$1,700 00	\$11,193 25	\$1,550 00	\$14,443 25	\$5,124 56	\$19,567 91	\$14 06	\$5 00	\$19 06.
Ann Arbor.....	2,000 00	21,875 00	1,230 00	24,915 00	7,433 87	32,338 87	15 72	4 67	20 39
Bad Axe.....	650 00	900 00	.....	1,550 00	747 56	2,297 56	6 25	3 01	9 26
Baraga.....	850 00	430 00	.....	1,280 00	931 58	2,201 58	14 88	10 72	25 60
Bay City.....	2,000 00	31,250 00	600 00	33,850 00	9,974 12	43,824 12	11 81	8 48	15 29
Bellaire.....	540 00	315 00	.....	855 00	139 34	994 34	.....	.....	.....
Bellevue.....	600 00	1,014 00	.....	1,614 00	.....	1,614 00	7 47	.....	7 47
Bellville.....	850 00	430 00	.....	1,330 00	327 60	1,657 60	.....	.....	.....
Barrien Springs.....	720 00	1,080 00	.....	1,800 00	254 00	2,054 00	12 86	1 88	14 78
Bessemer.....	850 00	1,800 00	.....	2,650 00	3,759 83	6,409 83	10 51	14 92	25 43
Big Rapids.....	1,500 00	9,127 75	.....	10,627 75	4,087 28	14,665 03	12 58	4 77	17 35.
Blissfield.....	700 00	680 00	.....	1,380 00	100 00	1,480 00	10 00	72	10 72
Boyne Falls.....	360 00	150 00	.....	510 00	105 35	615 35	5 06	1 04	6 00
Brighton.....	800 00	1,070 00	.....	1,870 00	915 26	2,785 26	10 56	5 17	15 73
Brockway Center.....	650 00	900 00	.....	1,550 00	550 00	2,100 00	7 64	2 22	9 86
Brooklyn.....	800 00	1,381 25	.....	2,181 25	731 02	2,912 27	13 14	4 40	17 54
Byron.....	700 00	580 00	.....	1,280 00	215 00	1,495 00	8 20	1 33	9 53
Byron Center.....	360 00	202 50	.....	562 50	179 44	741 94	8 27	2 63	10 90
Cadillac.....	1,300 00	5,575 00	400 00	7,275 00	7,128 61	14,403 61	12 67	12 42	25 09
Caledonia.....	500 00	380 00	.....	880 00	269 00	1,149 00	.....	.....	.....
Calumet.....	2,150 00	18,579 00	800 00	21,529 00	10,430 19	31,959 19	13 47	6 52	19 99
Cannonsburg.....	425 00	125 00	.....	550 00	600 00	1,150 00	.....	.....	.....
Caro.....	1,000 00	2,850 00	.....	3,850 00	1,194 89	5,044 89	11 56	3 58	15 14
Carsonville.....	500 00	200 00	.....	700 00	179 18	879 18	8 41	87	4 28
Casnovia.....	540 00	315 00	.....	855 00	194 09	1,049 09	10 06	2 28	12 34
Cassopolis.....	900 00	2,240 00	.....	3,140 00	1,856 50	4,996 50	10 82	4 68	15 50
Cedar Springs.....	900 00	1,654 00	.....	2,554 00	689 46	3,243 46	12 46	3 36	15 82
Central Mine.....	1,000 00	810 00	.....	1,810 00	680 00	2,490 00	10 40	3 80	14 20
Champion.....	1,400 00	3,763 70	.....	5,163 70	4,213 83	9,377 53	9 63	7 86	17 49
Cheboygan.....	1,000 00	2,461 00	.....	3,461 00	857 14	4,318 14	11 38	2 81	14 19

SUPERINTENDENT'S REPORT.

TABLE XVIII.—Continued.

Districts.	Counties.	No. of children between 5 and 20 years.	Estimated valuation of school property.	Amount paid for superintendence and instruction.	Average monthly wages of teachers.		Total expenditures.	Total indebtedness.	No. of children that attended school during the year.	No. of days of school.	No. of teachers employed.		Total wages of teachers for the year.	
					Men.	Women.					Men.	Women.	Men.	Women.
Green	Alpena.....	134	\$1,175	\$477 50	\$25 00	\$31 04	\$702 40	.....	77	200	1	2	\$105 00	\$372 50
Greenland No. 2, d.....	Ontonagon.....	67	600	1,050 00	70 00	35 00	1,372 53	.....	48	200	1	1	790 00	350 00
Greenville.....	Montcalm.....	883	40,000	7,916 50	78 83	39 76	10,457 74	.....	901	200	8	14	2,350 00	5,566 50
Grindstone City.....	Huron.....	289	3,000	1,106 00	65 00	25 33	1,987 49	\$525 00	174	197	1	2	650 00	456 00
Grosse Isle.....	Wayne.....	222	2,000	1,350 00	55 00	26 66	1,633 95	.....	140	200	1	3	550 00	800 00
Hadley.....	Lapeer.....	109	2,000	880 00	53 30	23 30	1,068 90	.....	105	178	1	2	525 00	355 00
Hamilton	Allegan.....	124	1,800	435 75	40 00	20 70	1,129 54	400 00	88	160	1	1	320 00	165 75
Hamtramck Tp. No. 2.....	Wayne.....	236	5,000	350 00	50 00	35 00	1,664 87	3,710 00	150	196	1	1	500 00	350 00
Hancock.....	Houghton.....	1,192	28,000	7,037 50	120 00	45 46	13,704 43	12,000 00	900	196	2	10	2,400 00	4,637 50
Hanover	Jackson.....	153	9,000	1,850 00	75 00	36 60	2,203 94	100 00	180	198	1	4	750 00	1,100 00
Harbor Springs	Emmet.....	292	4,000	1,514 00	72 00	32 00	2,417 65	525 00	234	180	1	3	650 00	884 00
Harrison	Clare.....	257	3,300	1,633 00	70 00	33 30	2,918 48	17 00	219	195	1	3	700 00	1,000 00
Harrisville	Alcona.....	307	4,000	1,680 00	65 00	33 10	2,541 38	960 00	239	200	1	3	650 00	1,030 00
Hart	Oceana.....	233	2,500	1,555 00	77 70	31 60	1,900 05	.....	190	180	1	3	700 00	855 00
Hartford.....	Van Buren.....	344	3,500	1,964 00	77 70	35 10	2,596 22	.....	301	178	1	4	700 00	1,234 00
Hartland	Livingston.....	90	2,500	581 00	45 00	29 50	731 53	.....	100	180	1	1	315 00	286 00
Hastings.....	Barry.....	841	40,000	5,007 50	65 00	33 65	9,124 81	11,500 00	849	199	2	11	1,900 00	3,707 50
Hersey	Osceola.....	165	4,000	1,300 00	70 00	30 00	2,002 03	750 00	139	194	1	2	700 00	600 00
Hesperia.....	Newaygo.....	275	4,000	1,274 50	51 88	33 30	1,560 37	101 83	247	180	2	2	674 50	600 00
Highland Station.....	Oakland.....	143	1,500	740 00	50 00	24 00	835 58	.....	104	200	1	1	500 00	240 00

GRADED SCHOOL STATISTICS.

Hilledale.....	1,070	51,000	8,089 54	105 00	87 69	17,723 26	10,000 00	691	190	2	17	2,000 00	6,089 50
Holland.....	1,307	28,000	5,716 87	135 00	36 44	17,153 67	18,000 00	1,055	195	1	15	1,350 00	4,466 87
Holland Tp. No. 1, 2.....	138	800	406 00	44 00	47 30	451 43	18 46	96	200	1	1	264 00	142 00
Holland Tp. No. 2.....	99	1,300	596 00	50 00	16 00	637 61	.....	81	200	1	1	500 00	96 00
Holly.....	372	15,000	8,000 00	100 00	83 80	8,914 85	1,800 00	400	200	1	7	1,000 00	2,000 00
Holt.....	147	1,800	702 00	48 00	80 00	1,504 66	339 29	105	177	1	1	432 00	270 00
Homer.....	805	8,500	2,250 00	58 60	83 20	2,784 71	.....	259	188	3	5	820 00	1,490 00
Horton.....	117	4,000	848 00	55 50	26 70	1,444 14	.....	94	176	1	2	500 00	848 00
Houghton.....	982	40,000	8,160 00	95 00	44 70	14,674 69	.....	533	200	2	14	1,980 00	6,260 00
Howard City.....	308	4,500	2,042 50	72 50	84 70	3,067 07	1,500 00	281	196	2	5	725 00	1,317 50
Howell.....	615	30,000	4,620 00	100 00	32 90	14,368 51	8,230 00	633	200	1	11	1,000 00	3,620 00
Hubbardston.....	171	4,500	990 00	.....	36 60	1,869 65	.....	183	180	.....	3	.....	990 00
Hudson.....	400	10,000	3,354 75	100 00	35 60	4,563 53	.....	347	187	1	7	1,000 00	2,354 75
Hudson Tp. No. 5.....	251	4,000	1,764 00	100 00	33 00	2,180 86	.....	173	180	1	3	900 00	864 00
Humboldt.....	130	3,000	1,110 00	75 00	40 00	1,752 82	76 82	90	195	1	1	750 00	360 00
Ida.....	111	1,500	384 00	40 00	24 00	528 74	158 00	73	180	1	1	360 00	120 00
Imlay City.....	514	8,500	3,242 50	90 00	29 64	7,101 45	9,184 41	453	200	1	8	900 00	2,342 50
Inverness Tp. No. 8, 9.....	224	1,200	1,000 00	65 00	35 00	1,225 13	.....	188	190	1	1	650 00	350 00
Ionla.....	1,333	55,000	11,630 00	73 70	41 83	19,931 62	3,666 67	1,049	195	4	21	2,950 00	3,780 00
Iron Mountain.....	1,056	19,000	7,439 50	120 00	46 00	14,129 99	4,500 00	981	200	1	15	1,200 00	6,239 50
Iron River.....	202	4,000	1,610 00	75 00	45 00	2,654 80	.....	202	197	1	2	750 00	860 00
Ironton.....	160	3,000	630 00	40 00	30 00	857 19	.....	94	173	1	1	360 00	270 00
Ironwood.....	1,033	35,000	6,065 00	118 00	53 20	24,335 72	15,000 00	605	200	2	8	1,890 00	4,060 00
Ishpeming.....	2,372	57,000	11,088 75	151 00	43 96	19,883 27	25,000 00	1,604	195	2	18	2,275 00	8,813 75
Ishpeming Tp. No. 1.....	120	1,200	1,000 00	60 00	40 00	1,196 06	.....	111	194	1	1	600 00	400 00
Ithaca.....	524	30,000	8,422 50	110 00	33 17	7,337 28	18,000 00	532	200	1	7	1,100 00	2,322 50
Jackson No. 1.....	2,316	150,000	22,195 70	160 00	47 43	47,265 99	14,000 00	2,002	195	2	40	3,200 00	13,985 70
Jackson No. 17.....	2,507	55,000	9,181 33	150 00	36 60	13,619 31	68 62	1,496	196	1	21	1,500 00	7,700 00

SUPERINTENDENT'S REPORT.

Districts.	Counties.	No of children between 5 and 20 years.	Estimated valuation of school property.	Amount paid for support and instruction.	Average monthly wages of teachers.		Total expenditures.	Total indebtedness.	No. of children that attended school during the year.	No. of days of school.	No. of teachers employed.		Total wages of teachers for the year.	
					Men.	Women.					Men.	Women.	Men.	Women.
Jacobsville	Houghton.....	106	\$500	\$428 27	.....	\$35 68	\$1,072 61	\$1,000 00	100	200	.....	8	.....	\$428 27
Jamestown	Ottawa.....	120	3,000	493 50	\$50 00	31 10	1,340 12	1,500 00	83	159	1	1	\$400 00	98 50
Jonesville.....	Hillsdale.....	464	40,000	2,840 00	100 00	36 80	4,612 65	.....	318	200	1	5	1,000 00	1,840 00
Kalamazoo	Kalamazoo.....	5,009	200,000	28,422 70	210 00	37 08	55,189 69	12,000 00	3,014	194	2	60	4,200 00	22,222 70
Kalamo	Eaton.....	116	200	497 50	37 50	21 94	560 80	.....	89	170	2	3	300 00	197 50
Kalkaska	Kalkaska.....	350	9,000	2,110 00	94 00	36 00	3,867 30	5,200 00	271	180	1	4	850 00	1,280 00
Kendall.....	Van Buren....	99	1,500	525 00	42 36	22 20	665 44	.....	77	160	1	2	339 00	186 00
Kingsley.....	G'd Traverse..	164	1,000	765 00	50 00	26 00	1,141 60	200 00	133	177	1	1	450 00	315 00
Kingston.....	Tuscola.....	146	1,200	612 00	40 00	23 00	1,025 01	200 00	96	180	1	1	330 00	252 00
Laingsburg.....	Shiawassee....	203	4,500	1,720 00	73 00	33 30	2,678 65	.....	203	196	1	3	750 00	970 00
Lake Linden.....	Houghton.....	1,812	12,000	8,287 50	140 00	45 50	12,578 76	.....	909	196	1	18	1,400 00	6,887 50
Lakeview	Montcalm.....	343	3,000	1,950 00	70 00	31 00	2,421 89	.....	224	200	1	4	700 00	1,250 00
Lamont	Ottawa.....	96	1,800	580 00	.....	41 40	704 00	86 00	87	177	.....	2	.....	580 00
L'Anse.....	Baraga.....	318	10,000	2,600 00	100 00	40 00	4,714 08	.....	229	200	1	5	1,000 00	1,600 00
Lansing.....	Ingham	3,049	100,000	18,241 87	126 00	44 56	36,811 98	51,000 00	2,075	190	2	37	2,600 00	15,641 87
Lapeer.....	Lapeer.....	863	22,000	6,000 00	86 00	30 70	8,488 26	.....	370	197	2	14	1,700 00	4,300 00
Lawrence.....	Van Buren....	180	9,000	1,528 00	77 70	30 60	1,888 13	.....	126	180	1	3	700 00	828 00
Lawton	Van Buren....	230	12,000	1,498 00	70 00	28 50	2,120 07	.....	237	190	1	3	700 00	798 00
Lealie	Ingham	378	15,000	2,760 00	96 00	30 10	4,611 00	.....	408	200	1	6	960 00	1,810 00
Lexington	Sanilac.....	291	3,000	1,900 00	80 00	27 50	2,285 29	.....	241	200	1	4	800 00	1,100 00

GRADED SCHOOL STATISTICS.

Leroy	213	1,000	1,006 00	46 80	83 50	1,446 18	.....	180	1	2	430 00	686 00
Linden	178	4,500	990 00	60 00	26 00	2,308 89	.....	178	1	2	540 00	450 00
Lisbon	96	2,400	810 00	60 00	80 00	923 55	.....	179	1	1	540 00	270 00
Litchfield	200	2,000	1,491 00	150 00	24 70	1,923 66	.....	172	1	5	600 00	891 00
Long Rapids	304	3,500	1,738 00	33 50	30 50	2,613 50	.....	160	1	9	290 00	1,468 00
Lowell	306	13,500	3,556 50	54 00	30 95	3,645 41	.....	200	2	9	1,080 00	2,476 50
Ludington	2,179	86,000	18,104 00	86 10	37 68	53,496 93	51,000 00	196	3	28	2,550 00	10,554 00
Luther	461	8,000	2,700 00	80 00	33 00	3,473 80	.....	196	1	5	800 00	1,950 00
Lyons	200	2,500	1,551 00	72 20	33 30	1,578 96	.....	180	1	3	650 00	901 00
Mackinac City	112	3,000	675 00	50 00	25 00	1,237 69	748 00	175	1	1	450 00	225 00
McBrides	240	2,000	1,115 00	50 00	30 00	1,397 46	.....	176	1	2	575 00	540 00
Mackinac Island	194	2,500	1,065 00	70 00	35 00	1,443 41	.....	156	1	2	500 00	525 00
Mancelona	424	3,000	2,250 00	80 00	23 30	3,234 97	2,000 00	180	1	6	720 00	1,530 00
Manchester	427	25,000	3,162 50	83 65	33 98	4,347 96	.....	200	2	8	836 50	2,276 00
Manistee	3,751	84,000	18,589 05	94 50	41 13	88,883 06	29,000 00	197	6	36	4,070 09	14,519 05
Manistique	516	4,000	3,900 00	100 00	43 30	3,300 49	25 43	196	1	6	1,000 00	2,900 00
Manton	276	10,000	1,298 00	57 00	28 00	3,361 95	8,000 00	200	1	3	570 00	723 00
Maple Rapids	208	3,000	1,444 00	43 20	29 00	1,801 76	.....	200	2	2	964 00	580 00
Marcellus	200	7,500	1,200 00	43 30	33 30	2,051 60	2,000 00	170	2	2	600 00	600 00
Marine City	974	15,000	2,760 00	81 00	27 30	4,523 72	50 00	195	1	7	810 00	1,950 00
Marlette	262	3,000	1,510 00	65 00	23 60	1,944 99	.....	200	1	3	650 00	880 00
Marquette	2,370	60,000	12,755 00	100 00	43 30	31,569 10	41,027 33	200	2	22	2,010 00	10,745 00
Marshall	1,230	100,000	9,727 50	125 00	35 60	13,673 75	.....	194	2	21	2,500 00	7,227 50
Marysville	183	2,500	630 00	.....	35 00	767 82	4 85	172	.....	2	.....	630 00
Mason	539	13,000	4,192 00	70 00	34 90	6,424 07	.....	200	2	8	1,400 00	2,793 00
Mattawan	107	3,000	472 50	40 00	23 12	559 25	.....	180	1	1	360 00	112 50
May	228	3,000	1,043 75	50 00	27 13	1,486 03	5,000 00	200	1	2	500 00	543 75
Mecosta	235	3,000	1,237 50	53 50	33 50	1,353 80	.....	180	2	1	945 00	293 50

SUPERINTENDENT'S REPORT.

Districts.	Counties.	No. of children between 5 and 20 years.	Estimated valuation of school property.	Amount paid for salaries and instruction.	Average monthly wages of teachers.		Total expenditures.	Total indebtedness.	No. of children that attended school during the year.	No. of days of school.	No. of teachers employed.		Total wages of teachers for the year.	
					Men.	Women.					Men.	Women.	Men.	Women.
Memphis.....	Macomb.....	258	\$5,000	\$1,160 00	\$60 00	\$28 00	\$1,766 59	\$35 00	200	194	1	2	\$600 00	\$560 00
Mendon.....	St. Joseph.....	215	1,200	2,175 00	80 00	38 10	2,391 22	.....	197	190	1	4	800 00	1,375 00
Menominee.....	Menominee.....	2,382	45,000	11,625 00	150 00	44 00	20,896 83	9,000 00	1,218	196	1	23	1,500 00	10,125 00
Metamora.....	Lapeer.....	169	3,500	963 00	55 00	26 00	1,172 03	.....	141	178	1	2	495 00	468 00
Michigamme.....	Marquette.....	870	7,500	2,028 25	45 18	26 12	2,952 05	.....	832	195	2	2	1,308 75	722 50
Middleville.....	Barry.....	225	1,400	1,600 00	50 00	30 00	4,232 82	.....	200	200	2	2	1,000 00	600 00
Midland Tp. No. 3.....	Midland.....	705	87,200	5,165 00	115 00	40 60	21,278 74	1,200 00	592	200	1	9	1,150 00	4,015 00
Midland Tp. No. 6.....	Midland.....	133	2,000	600 00	.....	39 50	866 18	.....	121	160	.....	2	.....	600 00
Milan.....	Washtenaw.....	815	3,500	1,498 00	66 60	25 30	2,628 34	.....	255	180	1	5	600 00	888 00
Milford.....	Oakland.....	386	16,000	2,170 00	80 00	27 40	3,957 08	7,500 00	306	198	1	5	800 00	1,870 00
Millburg.....	Berrien.....	109	2,500	640 00	55 00	25 00	774 73	.....	80	160	1	1	440 00	200 00
Millington.....	Tuscola.....	220	6,500	1,428 60	60 00	27 62	2,545 26	6,000 00	177	200	1	8	600 00	828 60
Minden City.....	Sanilac.....	185	2,000	620 00	40 00	22 00	876 50	588 50	140	200	1	1	400 00	220 00
Montague.....	Muskegon.....	527	20,000	3,586 88	70 00	37 31	6,366 87	2,650 00	492	200	2	6	1,400 00	2,196 88
Monroe.....	Monroe.....	1,972	30,000	4,850 00	120 00	33 18	20,378 73	9,180 00	556	196	1	11	1,200 00	3,650 00
Morenci.....	Lenawee.....	380	12,000	2,389 43	86 10	29 60	3,304 50	243 69	286	176	1	6	776 00	1,602 00
Morrice.....	Shiawassee.....	175	6,000	1,080 00	50 00	29 00	1,484 39	3,000 00	150	200	1	2	500 00	580 00
Morley.....	Mecosta.....	195	1,800	1,022 50	67 00	25 25	1,267 22	.....	193	196	1	2	670 00	852 50
Mt. Clemens.....	Macomb.....	1,400	27,800	5,074 00	66 00	36 09	6,827 47	.....	740	196	2	14	1,320 00	8,754 00
Mt. Morris.....	Genesee.....	161	2,000	702 00	50 00	28 00	817 02	118	178	1	1	450 00	252 00

GRADED SCHOOL STATISTICS.

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Mt. Pleasant.....	791	18,000	4,150 00	90 00	86 00	6,901 80	10,000 00	554	200	1	10	1,000 00	2,150 00
Mt. Pleasant.....	189	7,300	1,875 00	77 00	25 00	2,859 99	535 00	191	180	1	4	700 00	675 00
Muskegon.....	6,821	190,000	38,803 77	111 00	44 04	89,009 78	17,941 89	4,268	200	4	78	4,450 00	84,852 77
Napoleon.....	119	5,000	1,876 50	54 10	83 00	1,581 98	.....	100	188	2	2	757 50	619 00
Nashville.....	819	11,000	2,306 00	76 00	30 90	6,063 63	2,800 00	280	200	1	5	760 00	1,545 00
National Mine.....	297	5,000	1,850 00	90 00	47 50	2,702 45	1,160 00	159	196	2	3	900 00	950 00
Negaunee.....	2,089	45,000	7,533 50	160 00	44 65	20,348 15	30,000 00	984	122	1	14	1,000 00	5,983 50
Newaygo.....	415	5,000	2,276 00	90 00	34 40	3,491 83	74 00	262	198	1	4	900 00	1,876 00
New Boston.....	141	2,000	275 94	25 13	20 00	820 86	9 06	100	160	2	1	175 94	100 00
New Baltimore.....	335	22,000	1,160 00	60 00	28 00	1,858 39	.....	127	200	1	2	600 00	580 00
New Buffalo.....	220	4,000	1,835 00	60 00	31 66	1,690 01	.....	175	160	1	3	430 00	855 00
Newbury.....	246	5,500	1,650 00	75 00	45 00	2,841 20	8,000 00	151	200	1	2	750 00	900 00
New Haven.....	246	1,500	1,080 00	50 00	25 50	1,332 14	.....	204	200	1	2	500 00	580 00
New Holland.....	191	1,000	713 75	50 06	21 37	852 87	.....	120	200	1	1	500 00	313 75
New Hudson.....	75	4,000	430 00	40 00	20 00	562 34	.....	58	180	1	1	380 00	120 00
New Troy.....	126	4,000	509 50	55 00	17 95	802 49	.....	95	200	1	1	380 00	179 50
Niles.....	1,187	50,000	9,665 00	127 00	30 90	16,106 18	.....	904	180	2	20	2,300 00	7,335 00
North Adams.....	183	10,000	1,500 00	64 40	33 33	2,015 64	.....	210	180	1	3	600 00	900 00
North Branch.....	279	10,000	1,400 00	60 00	26 60	7,574 81	7,000 00	219	197	1	3	600 00	800 00
North Muskegon.....	853	2,000	3,379 75	64 61	40 94	6,021 03	5,000 00	520	200	3	6	1,496 25	1,883 50
Northport.....	203	2,000	977 50	.....	37 59	1,179 09	.....	132	180	.....	5	.....	977 50
Northville.....	425	18,000	2,390 00	80 00	27 19	3,238 59	.....	295	200	1	6	800 00	1,590 00
Norway.....	642	9,000	4,390 00	100 00	47 70	6,354 15	.....	537	200	1	8	1,000 00	3,890 00
Nunica.....	152	2,500	775 00	63 12	27 00	1,214 33	.....	106	189	1	2	505 00	270 00
Okemos.....	144	2,000	629 00	45 50	28 30	866 70	.....	122	176	3	2	385 00	255 00
Olivet.....	262	7,000	1,356 00	60 00	31 30	3,495 92	3,800 00	221	180	1	8	540 00	816 00
Onakama.....	182	2,000	675 00	.....	37 59	1,246 79	800 00	120	180	.....	2	.....	675 00
Onondaga.....	126	1,000	630 00	50 00	20 00	959 04	.....	88	180	1	1	450 00	180 00

SUPERINTENDENT'S REPORT.

TABLE XVIII.—Continued.

Districts.	Counties.	No. of children between 5 and 20 years.	Estimated valuation of school property.	Amount paid for superintendence and instruction.	Average		Total expenditures.	Total indebtedness.	No. of children that attended school during the year.	No. of days of school.	No. of teachers employed.		Total wages of teachers for the year.	
											Men.	Women.	Men.	Women.
Ontonagon.....	Ontonagon.....	332	\$5,000	\$2,900 00	\$111 00	\$43 20	\$2,900 85	.....	237	176	1	5	\$1,000 00	\$1,900 00
Opechee.....	Houghton.....	775	.....	4,250 00	105 00	40 70	7,205 04	.....	335	200	1	11	1,050 00	2,200 00
Orion.....	Oakland.....	205	2,500	800 00	50 00	30 00	912 37	.....	186	200	1	1	500 00	300 00
Ortonville.....	Oakland.....	110	2,000	320 00	60 00	22 00	1,053 14	.....	102	200	1	1	600 00	220 00
Oacoda.....	Iosco.....	1,171	10,000	2,779 33	90 00	23 23	7,701 15	\$1,204 26	612	300	1	9	900 00	2,579 33
Oasco.....	Hillsdale.....	113	2,000	432 00	23 30	13 00	575 91	.....	91	130	1	1	300 00	162 00
Otlaiville.....	Genesee.....	193	4,000	335 00	45 00	21 23	1,103 61	323 50	163	196	1	2	450 00	335 00
Otsego.....	Allegan.....	441	10,000	2,804 00	105 00	33 10	3,253 13	.....	463	130	1	6	950 00	1,354 00
Otter Lake.....	Lapeer.....	154	1,200	702 50	65 00	25 33	324 52	.....	143	130	1	2	436 00	241 50
Overisel.....	Allegan.....	133	2,000	423 00	22 00	26 00	577 10	.....	133	130	1	1	233 00	150 00
Ovid.....	Clinton.....	400	20,000	2,220 00	100 00	31 70	4,209 49	.....	435	200	1	7	1,000 00	2,220 00
Owosso.....	Shiawassee.....	1,023	64,000	11,940 00	69 30	27 50	21,559 46	.....	1,225	193	5	21	2,406 00	7,374 00
Orford.....	Oakland.....	322	14,000	1,325 00	73 50	30 00	2,445 95	9,000 00	233	200	1	4	725 00	1,200 00
Palmyra.....	Lenawee.....	143	2,000	623 75	45 00	24 30	744 05	.....	95	175	1	2	405 00	215 75
Palo.....	Ionia.....	89	4,000	1,110 00	60 00	30 00	1,419 22	.....	95	137	1	2	600 00	510 00
Paris.....	Meconia.....	103	1,200	713 25	45 25	23 00	351 20	9 37	54	160	1	1	435 25	233 00
Paris Tp. No. 1.....	Kent.....	129	1,200	530 00	45 00	25 00	315 73	135 00	99	130	1	1	405 00	175 00
Parma.....	Jackson.....	203	15,000	1,752 00	70 00	23 00	2,035 12	.....	227	200	1	4	700 00	1,035 00
Paw Paw.....	Van Buren.....	243	40,000	2,944 00	120 00	34 30	7,541 23	2,160 00	251	200	1	3	1,200 00	2,744 00
Pentwater.....	Oceana.....	576	10,000	2,251 50	63 25	34 03	5,074 73	.....	291	196	2	6	1,235 00	1,235 50

GRADED SCHOOL STATISTICS.

Pequaming.....	126	.....	1,134 00	.....	56 70	1,593 90	.....	86	198	.....	2	.....	1,134 00
Perry	159	4,000	1,315 00	55 00	80 00	2,775 69	.....	166	200	.....	2	715 00	600 00
Petoakey.....	729	10,000	4,965 00	105 00	86 30	6,577 49	8,500 00	619	200	.....	1	1,050 00	8,915 00
Petersburg.....	202	9,000	1,152 00	50 00	26 00	1,499 27	.....	182	176	.....	1	450 00	702 00
○ Pewamo	121	1,600	1,098 00	60 00	81 00	1,853 66	.....	126	176	.....	1	540 00	558 00
Pierson	150	2,000	675 00	45 00	30 00	790 45	.....	122	180	.....	1	405 00	270 00
Pinckney	203	8,000	1,301 25	53 62	38 26	2,822 09	6,000 00	189	209	.....	1	538 26	665 00
Pinconning.....	287	4,000	1,300 00	60 00	35 00	2,639 96	1,500 00	204	197	.....	1	600 00	700 00
Pinnebog	194	1,600	730 00	55 00	23 20	813 59	.....	141	200	.....	1	550 00	180 00
Plainwell	438	16,000	3,043 00	100 00	70 00	5,088 09	123 60	410	177	.....	1	900 00	2,142 00
Plymouth	407	15,000	3,075 00	100 00	32 90	5,541 05	5,000 00	304	200	.....	1	1,000 00	2,075 00
Pontiac	1,233	30,000	11,690 00	102 00	38 00	15,575 60	.....	1,088	207	.....	4	4,080 00	7,600 00
Port Austin.....	375	4,000	1,407 00	80 00	30 00	1,742 88	.....	186	199	.....	1	800 00	600 00
Port Crescent	117	3,500	555 00	45 00	25 00	610 11	.....	103	176	.....	1	405 00	150 00
Port Hope	272	2,500	925 00	60 00	32 50	1,128 44	.....	150	192	.....	1	600 00	325 00
Port Huron	3,988	102,900	16,575 00	125 00	39 00	23,972 72	14,500 00	2,382	196	.....	2	2,500 00	14,075 00
Portland.....	472	17,000	4,280 00	100 00	35 00	8,363 00	4,800 00	517	190	.....	1	1,000 00	3,280 00
Port Sanilac.....	222	2,000	999 00	60 00	25 50	1,250 55	1,200 00	154	180	.....	1	540 00	459 00
Potterville.....	219	4,000	986 50	48 04	25 50	1,293 74	.....	180	176	.....	2	528 50	458 00
Powers.....	231	2,800	1,000 00	65 00	35 00	1,784 31	654 62	136	197	.....	1	650 00	350 00
Quincy	310	10,000	2,870 00	58 50	24 00	4,373 87	.....	300	200	.....	2	1,170 00	1,700 00
Quincy Tp. No. 1.....	514	.....	2,350 00	100 00	45 00	3,120 88	.....	229	196	.....	1	1,000 00	1,350 00
Quinnesec.....	153	8,000	1,120 00	68 00	40 00	1,714 91	132 87	130	194	.....	1	680 00	440 00
Ransom	88	1,200	268 75	52 20	20 17	405 95	.....	80	160	.....	2	157 00	201 75
Ravenna.....	128	2,000	702 00	50 00	23 00	1,083 04	400 00	138	180	.....	1	450 00	252 00
Reading.....	249	8,000	1,914 00	81 60	32 40	3,570 01	1,200 00	185	180	.....	2	785 00	1,179 00
Reed City.....	721	10,000	3,280 00	64 00	33 30	5,221 66	1,200 00	595	200	.....	2	1,280 00	2,000 00
Reese.....	228	2,000	675 00	45 00	30 00	835 04	.....	171	172	.....	1	405 00	270 00

TABLE XVIII.—Continued.

Districts.	Counties.	No. of children between 5 and 20 years.	Estimated valuation of school property.	Amount paid for superintendence and instruction.	Average monthly wages of teachers.		Total expenditures.	Total indebtedness.	No. of children that attended school during the year.	No. of days of school.	No. of teachers employed.		Total wages of teachers for the year.	
					Men.	Women.					Men.	Women.		
Republic.....	Marquette	734	\$13,000	\$4,907 75	\$140 00	\$50 11	\$7,815 14	.....	546	196	1	7	\$1,400 00	\$3,507 75
Richland.....	Kalamazoo	126	5,500	1,425 00	80 00	30 26	2,307 73	\$1,075 00	144	195	1	2	800 00	625 00
Richmond.....	Macomb	233	8,000	1,886 00	75 00	28 80	2,380 86	1,200 00	201	178	1	3	675 00	720 00
Ridgeway.....	Lenaawee.....	72	2,500	650 00	44 40	27 70	700 66	.....	68	180	1	1	400 00	250 00
Rochester.....	Oakland	208	.....	1,810 00	85 00	32 00	2,413 69	.....	243	200	1	3	850 00	980 00
Rockford.....	Kent	233	20,000	1,944 32	55 00	23 45	4,280 15	6,000 00	285	200	2	4	1,100 00	844 32
Rockland.....	Ontonagon.....	202	3,000	2,900 00	126 90	65 70	3,607 96	.....	160	130	2	3	1,650 00	1,250 00
Rogers City.....	Presque Isle.....	218	3,000	889 80	45 40	31 00	2,044 13	5,000 00	155	180	4	2	590 80	279 00
Romeo.....	Macomb	530	25,000	3,900 00	150 09	34 20	10,160 12	4,240 00	459	200	1	7	1,500 00	2,400 00
Roscommon.....	Roscommon.....	138	1,000	765 00	.....	42 50	1,017 09	.....	124	180	.....	2	.....	765 00
Royal Oak.....	Oakland	163	2,500	635 00	47 20	30 00	824 86	.....	116	140	2	1	425 00	210 00
Ryerson.....	Muskegon	435	3,500	2,330 00	90 00	34 46	4,956 64	.....	834	200	1	7	900 00	1,980 00
Saginaw.....	Saginaw	5,196	128,522	23,010 94	102 00	35 32	59,835 94	22,000 00	2,916	200	5	50	5,100 00	17,910 94
St. Charles.....	Saginaw	303	7,000	1,668 75	75 00	35 34	3,951 68	2,000 00	169	200	1	3	750 00	918 76
St. Clair.....	St. Clair.....	752	25,000	4,702 50	67 50	32 55	7,842 36	7,750 00	619	196	2	11	1,350 00	3,352 50
St. Ignace.....	Mackinac.....	917	15,000	3,733 10	55 69	30 32	9,123 64	12,900 00	539	197	3	7	1,670 75	2,122 35
St. James.....	Manitou	159	600	150 00	40 00	28 00	223 21	350 00	56	138	1	1	80 00	140 00
St. Johns.....	Clinton.....	907	39,000	6,080 00	120 09	34 86	11,335 36	19,600 00	725	194	1	14	1,300 00	4,880 00
St. Joseph.....	Berrien	1,201	45,000	5,515 00	73 06	37 84	11,736 59	9,000 00	800	200	2	12	1,315 00	4,200 00

GRADED SCHOOL STATISTICS.

CXV

St. Louis.....	Gratiot.....	765	12,000	4,409 51	98 86	31 08	7,285 78	5,000 00	621	183	9	12	1,120 00	3,289 51
Salem	Washtenaw ...	108	1,400	439 25	80 80	18 00	836 40	500 00	92	180	8	1	881 25	108 00
Saline.....	Washtenaw ...	280	25,000	2,580 00	90 00	33 60	8,821 14	55 00	146	200	1	5	900 00	1,680 00
Sand Beach.....	Huron.....	397	5,500	2,500 00	82 50	33 50	8,431 74	1,254 71	309	200	1	5	825 00	1,675 00
Sand Lake.....	Kent.....	162	2,500	898 75	50 00	24 93	1,449 63	250 00	150	180	1	2	450 00	448 75
Sanilac Tp. No. 2.....	Sanilac.....	114	1,500	489 00	40 00	20 00	606 55	.....	71	200	1	1	400 00	80 00
Saranac.....	Ionia.....	800	12,000	1,950 00	70 00	31 25	2,505 57	.....	253	200	1	4	700 00	1,250 00
Saugatuck.....	Allegan.....	362	8,000	1,667 00	72 22	23 25	2,315 35	.....	348	180	1	4	650 00	1,017 00
Sault Ste. Marie.....	Chippewa	1,548	30,000	5,334 00	86 22	28 20	10,663 02	3,000 00	905	200	2	11	1,553 00	8,732 80
Schoolcraft.....	Kalamazoo	290	24,000	2,542 00	94 44	37 60	3,669 37	.....	280	180	1	5	850 00	1,692 00
Sebewaing.....	Huron	352	3,000	850 00	60 00	25 00	1,156 45	.....	127	200	2	1	600 00	250 00
Shaftsbury	Shiawassee	80	1,550	547 50	45 00	30 83	924 82	535 00	76	177	1	1	270 00	277 50
Shelby	Oceana.....	280	3,500	1,355 00	65 00	32 08	2,106 34	104 50	189	177	1	3	535 00	770 00
Shepherd	Isabella.....	192	2,200	851 75	50 00	23 23	1,642 79	87 00	150	160	1	3	400 00	451 75
Sheridan.....	Montcalm	163	2,000	1,170 00	60 00	35 00	1,277 01	.....	110	177	1	2	540 00	630 00
Sherwood.....	Branch.....	157	2,000	920 00	33 61	25 00	1,119 83	.....	133	180	3	1	695 00	226 00
Somerset Centre.....	Hilledale.....	75	1,800	364 00	30 00	17 43	403 01	.....	68	180	1	3	120 00	244 00
South Frankfort.....	Benzie	157	3,500	900 00	55 00	35 00	1,134 14	.....	118	198	1	1	550 00	350 00
South Haven.....	Van Buren....	510	7,000	2,974 60	100 00	29 92	5,022 33	.....	415	190	1	7	1,000 00	1,974 60
South Lyon.....	Oakland.....	201	4,000	1,384 00	70 00	24 43	2,259 34	1,700 00	161	188	2	3	700 00	684 00
Sparta Centre.....	Kent.....	233	4,500	1,350 00	70 00	37 50	1,597 45	.....	163	200	1	2	700 00	650 00
Spring Lake.....	Ottawa.....	704	8,500	3,608 20	100 00	24 32	4,203 15	125 00	476	190	1	8	1,000 00	2,608 20
Springport.....	Jackson.....	138	4,000	1,450 00	70 00	37 50	1,745 17	.....	113	200	1	2	700 00	750 00
Springwells Tp. No. 1.....	Wayne	470	7,000	260 00	60 00	31 67	1,767 04	5,500 00	140	200	1	2	600 00	380 00
Springwells Tp. No. 2.....	Wayne	334	5,000	1,000 00	60 00	40 00	1,687 21	.....	120	194	1	1	600 00	400 00
Springwells Tp. No. 4.....	Wayne	564	7,000	688 75	45 83	30 69	1,896 96	4,500 00	100	186	1	1	412 50	276 25
Stambaugh	Iron.....	181	3,000	950 00	.....	47 50	1,200 75	800 00	122	195	.....	2	.....	950 00

TABLE XVIII.—Continued.

Districts.	Counties.	No. of children between 5 and 20 years.	Estimated valuation of school property.	Amount paid for maintenance and instruction.	Average monthly wages of teachers.		Total expenditures.	Total indebtedness.	No. of children that attended school during the year.	No. of days of school.	No. of teachers employed.		Total wages of teachers for the year.	
					Men.	Women.					Men.	Women.	Men.	Women.
Standish	Arenac	186	\$3,000	\$608 00	.....	\$37 50	\$2,826 34	\$1,227 00	120	200	.....	2	.....	\$750 00
Stanton	Montcalm	615	7,500	4,402 80	\$90 00	36 11	6,199 49	.....	455	200	1	10	\$900 00	3,502 80
Sterling	Arenac	184	8,200	877 50	50 00	47 50	2,920 58	2,464 00	125	180	1	1	450 00	427 50
Stronach	Manistee	210	2,050	795 00	50 00	38 33	1,146 95	1,024 34	108	175	1	3	450 00	845 00
Stephenson	Menominee	269	2,500	1,245 00	.....	42 27	2,420 30	1,890 00	146	180	.....	3	.....	980 00
Sturgis	St. Joseph	521	35,000	3,957 00	76 00	34 91	5,081 73	.....	403	188	2	8	1,304 00	2,653 00
Summit City	Gd. Traverse	115	1,200	422 00	40 00	30 00	679 61	281 00	106	140	1	1	280 00	210 00
Sumner	Gratiot	137	4,000	775 00	50 00	23 21	1,524 66	535 00	82	180	1	2	450 00	325 00
Sutton's Bay	Leelanaw	136	4,800	724 00	50 00	28 00	961 24	.....	96	200	1	1	500 00	224 00
Tawas City	Iosco	539	7,000	2,200 00	70 00	40 54	3,026 98	2,680 00	263	195	1	4	700 00	1,500 00
Tecumseh	Lenawee	557	42,000	4,950 00	114 54	31 27	9,949 24	4,105 00	504	195	2	13	1,280 00	3,690 00
Tekonsha	Calhoun	176	10,000	1,420 00	77 78	30 00	1,743 88	.....	180	176	1	3	700 00	720 00
Thornville	Lapeer	99	1,800	687 50	55 50	23 50	756 28	.....	83	180	1	1	499 50	188 00
Three Oaks	Berrien	322	6,000	1,734 00	75 00	32 00	2,169 02	.....	271	176	1	4	675 00	1,059 00
Three Rivers No. 1	St. Joseph	516	24,000	4,654 00	125 00	36 21	9,770 96	4,000 00	488	200	1	10	1,250 00	3,404 00
Three Rivers No. 4	St. Joseph	308	7,000	2,080 00	80 00	32 00	4,188 34	1,000 00	243	195	1	4	800 00	1,280 00
Traverse City	Gd. Traverse	1,042	35,000	9,160 00	138 88	46 39	19,051 07	19,000 00	844	180	2	16	2,500 00	6,660 00
Trenton	Wayne	448	2,000	1,200 00	65 00	27 50	1,532 81	.....	301	195	1	2	650 00	550 00
Trufant	Montcalm	152	600	540 00	.....	30 00	812 50	.....	143	180	.....	2	.....	540 00

GRADED SCHOOL STATISTICS.

Tuscola	147	1,000	630 00	50 00	20 00	845 83	.....	184	180	1	1	450 00	180 00
Tuscola	123	1,500	750 00	50 00	25 00	924 97	.....	106	198	2	1	500 00	250 00
Union City	427	20,000	4,180 00	100 00	85 11	7,812 68	293 36	413	195	1	9	1,000 00	3,160 00
Unionville	194	3,000	970 00	50 00	23 50	1,251 57	.....	151	196	1	2	500 00	470 00
Utica	368	18,000	2,140 00	60 00	31 33	2,865 62	.....	241	200	2	8	1,200 00	940 00
Vandalia	150	8,000	1,339 50	66 67	29 58	1,090 11	8,000 00	160	170	1	4	600 00	739 50
Vassar	626	24,000	3,540 00	100 00	31 75	6,481 29	2,000 00	474	197	1	8	1,000 00	2,540 00
Vermontville	262	8,000	1,593 00	80 00	32 33	1,919 74	.....	246	180	1	8	720 00	873 00
Vernon	209	3,000	1,550 00	65 00	30 00	2,178 12	200 00	197	200	1	3	650 00	900 00
Vicksburg	284	7,500	2,188 75	73 64	33 87	3,034 09	600 00	272	180	4	5	662 75	1,524 00
Vriesland	159	2,650	780 00	48 00	30 00	1,503 45	850 00	100	200	1	1	480 00	300 00
Vulcan	204	3,000	1,750 00	75 00	50 00	3,869 45	750 00	170	194	1	2	750 00	1,000 00
Waldron	133	2,000	624 00	48 00	30 00	797 35	.....	98	153	1	1	384 00	240 00
Walker Tp. No. 14.	182	1,500	540 00	.....	30 00	1,368 42	1,680 00	122	180	.....	2	.....	540 00
Washington	98	1,500	622 50	39 30	29 83	745 89	.....	94	176	1	1	354 00	238 50
Watervliet	151	2,200	725 00	55 50	25 00	818 28	.....	120	180	1	1	500 00	225 00
Watrousville	108	150	545 00	50 00	30 00	607 31	25 00	78	180	1	1	300 00	270 00
Wayland	158	5,000	1,214 94	55 00	20 50	1,879 61	324 00	146	180	1	4	500 00	700 20
Wayne	268	20,500	2,300 00	80 00	30 00	4,444 69	4,000 00	350	200	1	5	800 00	1,500 00
Webberville	251	2,400	960 00	50 00	23 00	1,121 24	.....	162	196	1	3	500 00	460 00
West Bay City	3,612	70,100	16,000 00	79 00	37 40	36,838 08	29,000 00	2,765	197	4	36	2,890 00	13,810 00
West Branch	326	6,500	1,296 76	73 10	39 25	4,222 07	6,301 00	261	170	1	3	511 76	785 00
Wheeler	105	1,800	420 00	33 70	25 00	610 83	1,200 00	100	160	2	1	270 00	150 00
White Cloud	230	4,000	1,150 00	50 00	32 50	2,506 33	1,200 00	141	200	1	2	500 00	650 00
Whitehall	623	30,000	3,788 00	100 00	34 80	5,518 62	.....	541	210	1	8	1,000 00	2,788 00
White Pigeon	287	20,000	2,770 00	120 00	32 00	3,602 06	.....	280	200	1	6	1,500 00	1,600 00
White Rock	127	2,000	700 00	55 00	25 00	796 12	.....	95	200	1	1	550 00	150 00

TABLE XVIII.—Continued.

Districts.	Counties.	No. of children between 5 and 20 years.	Estimated valuation of school property.	Amount paid for superintendence and instruction.	Average monthly wages of teachers.		Total expenditures.	Total indebtedness.	No. of children that attended school during the year.	No. of days of school.	No. of teachers employed.		Total wages of teachers for the year.	
					Men.	Women.					Men.	Women.	Men.	Women.
Williamston.....	Ingham.....	436	\$20,000	\$2,186 00	\$70 00	\$32 80	\$6,892 41	\$2,780 43	300	200	1	5	\$700 00	\$1,486 00
Woodland.....	Barry.....	117	3,500	800 00	40 00	.....	1,543 49	500 00	100	200	2	.....	800 00	.....
Worth.....	Arenac.....	168	2,000	400 00	43 50	20 00	1,948 65	1,300 00	103	160	1	1	340 00	60 00
Wyandotte.....	Wayne.....	1,437	50,000	4,270 00	110 00	85 20	7,767 28	.....	508	193	1	9	1,100 00	3,170 00
Ypsilanti.....	Washtenaw...	1,740	55,000	11,609 38	181 00	36 90	16,174 31	.....	847	200	5	18	5,150 00	6,459 83
Zeeland.....	Ottawa.....	388	4,000	1,380 00	58 00	26 60	1,990 09	.....	316	200	1	8	530 00	800 00
Zilwaukee.....	Saginaw.....	477	6,000	2,200 00	62 50	31 60	2,869 26	.....	243	200	2	3	1,250 00	950 00
Zutphen.....	Ottawa.....	132	1,200	472 50	39 37	.....	643 74	.....	103	160	2	.....	472 50	.....

TABLE XIX.

Financial Statistics of One Hundred and Eighty-nine Graded Schools, as reported by Superintendents and Principals for the School Year 1887-8.

Districts.	Amount paid superin- tendent or principal.	Amount paid regular teachers.	Amount paid special teachers.	Total amount paid for instruction.	Amount paid for incl- dentals.	Total cost of schools.	Cost per capita for in- struction.	Cost per capita for in- cidentals.	Total cost per capita.
Adrian.....	\$1,700 00	\$11,193 25	\$1,550 00	\$14,443 25	\$5,124 56	\$19,567 91	\$14 06	\$5 00	\$19 06.
Ann Arbor.....	2,000 00	21,675 00	1,230 00	24,905 00	7,438 87	32,338 87	15 72	4 67	20 39.
Bad Axe.....	650 00	900 00	.....	1,550 00	747 56	2,297 56	6 25	3 01	9 26.
Baraga.....	850 00	430 00	.....	1,280 00	921 58	2,201 58	14 88	10 72	25 60
Bay City.....	2,000 00	31,250 00	600 00	33,850 00	9,974 12	43,824 12	11 81	8 48	15 29
Bellaire.....	540 00	815 00	.....	555 00	139 84	994 84	.....	.....	.....
Bellevue.....	600 00	1,014 00	.....	1,644 00	.....	1,644 00	7 47	.....	7 47
Bellville.....	850 00	480 00	.....	1,330 00	827 60	1,657 60	.....	.....	.....
Berrien Springs.....	720 00	1,060 00	.....	1,800 00	254 00	2,054 00	12 95	1 88	14 78
Bessemer.....	850 00	1,800 00	.....	2,650 00	3,759 83	6,409 83	10 51	14 92	25 43
Big Rapids.....	1,500 00	9,127 75	.....	10,627 75	4,067 28	14,695 03	12 58	4 77	17 35.
Blissfield.....	700 00	680 00	.....	1,380 00	100 00	1,480 00	10 00	72	10 72.
Boyne Falls.....	360 00	150 00	.....	510 00	105 35	615 35	5 05	1 04	6 09
Brighton.....	800 00	1,070 00	.....	1,870 00	915 26	2,785 26	10 56	5 17	15 73
Brockway Center.....	650 00	900 00	.....	1,550 00	550 00	2,100 00	7 64	2 22	9 86.
Brooklyn.....	800 00	1,381 25	.....	2,181 25	731 02	2,912 27	13 14	4 40	17 54
Byron.....	700 00	580 00	.....	1,280 00	215 00	1,495 00	8 20	1 88	9 58.
Byron Center.....	360 00	202 50	.....	562 50	179 44	741 94	8 27	2 63	10 90.
Cadillac.....	1,300 00	5,575 00	400 00	7,275 00	7,128 61	14,403 61	12 67	12 42	25 09.
Caledonia.....	500 00	380 00	.....	880 00	269 00	1,149 00	.....	.....	.....
Calumet.....	2,150 00	18,579 00	800 00	21,529 00	10,430 19	31,959 19	13 47	6 52	19 99
Cannonsburg.....	425 00	125 00	.....	550 00	600 00	1,150 00	.....	.....	.....
Caro.....	1,000 00	2,850 00	.....	3,850 00	1,194 89	5,044 89	11 56	3 58	15 14
Carsonville.....	500 00	200 00	.....	700 00	179 18	879 18	8 41	87	4 28
Casnovia.....	540 00	815 00	.....	855 00	194 09	1,049 09	10 06	2 23	12 34
Cassopolis.....	900 00	2,240 00	.....	3,140 00	1,856 50	4,996 50	10 82	4 68	15 50
Cedar Springs.....	900 00	1,654 00	.....	2,554 00	689 46	3,243 46	12 46	3 36	15 82
Central Mine.....	1,000 00	810 00	.....	1,810 00	680 00	2,490 00	10 40	3 80	14 20
Champion.....	1,400 00	3,763 70	.....	5,163 70	4,213 83	9,377 53	9 63	7 86	17 49
Cheboygan.....	1,000 00	2,461 00	.....	3,461 00	857 14	4,318 14	11 38	2 81	14 19

TABLE XIX.—Continued.

Districts.	Amount paid superintendent or principal.	Amount paid regular teachers.	Amount paid special teachers.	Total amount paid for instruction.	Amount paid for incidentals.	Total cost of schools.	Cost per capita for instruction.	Cost per capita for incidentals.	Total cost per capita.
Clarkston.....	\$700 00	\$540 00	.....	\$1,240 00	\$353 46	\$1,593 46	\$8 28	\$2 37	\$10 65
Clayton.....	480 00	256 50	.....	736 50	150 00	886 50	8 66	1 76	10 42
Clinton.....	800 00	1,200 00	.....	2,000 00	527 26	2,527 26	7 63	2 01	9 64
Clio.....	500 00	800 00	.....	800 00	115 49	915 49	5 83	84	6 67
Coldwater.....	1,100 00	8,510 00	\$550 00	10,160 00	4,371 60	14,531 60	12 75	5 48	18 23
Columbiaville.....	500 00	480 00	.....	980 00	488 27	1,448 27	5 88	2 99	8 87
Concord.....	800 00	980 00	.....	1,780 00	465 62	2,225 62	11 73	3 10	14 83
Coral.....	500 00	440 00	.....	940 00	829 18	1,269 18	.....	.....	.....
Covert.....	857 75	400 00	.....	757 75	197 20	954 95	.....	.....	.....
Croswell.....	600 00	800 00	184 00	1,084 00	243 96	1,327 96	4 75	70	5 45
Crystal Falls.....	750 00	1,350 00	.....	2,100 00	1,040 70	3,140 70	14 89	7 38	22 27
Dansville.....	700 00	840 00	.....	1,540 00	574 60	2,114 60	12 41	4 63	17 04
Davisburg.....	230 00	225 00	.....	455 00	75 60	530 60	11 66	1 94	13 60
Detroit.....	4,000 00	233,873 23	12,198 00	250,071 23	115,520 62	365,591 85	14 50	6 70	21 20
Dexter.....	810 00	1,474 00	.....	2,284 00	450 00	2,734 00	10 15	2 00	12 15
Douglas.....	750 00	628 00	.....	1,378 00	.....	1,378 00	9 12	.....	9 12
East Blissfield.....	700 00	825 00	.....	1,525 00	432 21	1,957 21	11 30	3 21	14 51
East Lake.....	650 00	900 00	.....	1,550 00	332 26	1,882 26	9 45	2 03	11 48
East Tawas.....	950 00	1,920 00	.....	2,870 00	953 51	3,823 51	8 46	2 81	11 27
Edwardsburg.....	450 00	630 00	.....	1,080 00	611 00	1,691 00	7 35	4 15	11 50
Elk Rapids.....	1,000 00	3,250 00	.....	4,250 00	2,042 92	6,292 92	15 35	4 99	20 34
Elm Hall.....	405 00	243 50	.....	648 50	179 94	828 44	5 95	1 65	7 60
Erie.....	270 00	450 00	.....	720 00	112 15	832 15	7 20	1 12	8 32
Escanaba.....	1,200 00	3,528 75	.....	4,728 75	1,097 11	5,825 86	9 87	2 29	12 16
Essexville.....	650 00	1,539 74	.....	2,189 74	1,253 14	3,442 88	.....	.....	.....
Fayette.....	629 25	385 45	.....	1,014 70	189 75	1,204 45	10 15	1 90	12 05
Fenton.....	1,000 00	4,475 00	.....	5,475 00	1,015 73	6,490 73	11 22	2 08	13 30
Ferrysburg.....	400 00	440 00	.....	840 00	200 00	1,040 00	.....	.....	.....
Filer City.....	610 00	192 50	.....	802 50	1,073 15	1,875 65	10 42	13 93	24 35
Flat Rock.....	700 00	500 00	.....	1,200 00	400 00	1,600 00	8 28	2 75	11 03
Flint.....	1,500 00	15,375 00	.....	16,875 00	.....	16,875 00	12 05	.....	12 05
Fowlerville.....	700 00	1,648 00	.....	2,348 00	610 05	2,958 05	9 60	2 49	12 09
Galesburg.....	650 00	978 20	.....	1,628 20	457 67	2,085 87	9 69	2 72	12 41
Gaylord.....	450 00	630 00	.....	1,080 00	592 80	1,672 80	8 80	4 56	12 86
Girard.....	380 00	225 00	.....	585 00	125 00	710 00	8 86	1 79	10 15
Grand Ledge.....	320 00	550 00	870 00	469 41	1,339 41	4 35	2 85	6 70

FINANCIAL STATISTICS.

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TABLE XIX.—Continued.

Districts.	Amount paid superin- tendent or principal.	Amount paid regular teachers.	Amount paid special teachers.	Total amount paid for instruction.	Amount paid for in- cidentals.	Total cost of schools.	Cost per capita for instruction.	Cost per capita for incidentals.	Total cost per capita.
Grand Rapids.....	\$2,500 00	\$102,040 24	\$2,900 00	\$107,440 24	\$33,887 48	\$140,827 67	\$14 87	\$4 62	\$19 49
Grass Lake.....	1,080 00	1,170 00	.....	2,250 00	250 00	2,500 00	12 10	1 45	13 55
Greenland No. 1.....	585 00	.....	.....	585 00	96 01	681 01	17 20	2 82	20 02
Greenland No. 2.....	700 00	350 00	.....	1,050 00	322 53	1,372 53	25 00	7 68	32 68
Greenville.....	1,500 00	5,976 00	453 00	7,929 00	2,269 79	10,198 79	12 12	3 47	15 59
Grindstone City.....	650 00	500 00	.....	1,150 00	118 00	1,268 00	10 08	1 03	11 11
Hadley.....	525 00	355 00	.....	880 00	188 90	1,068 90	8 38	1 80	10 18
Hancock.....	1,500 00	5,137 50	400 00	7,037 50	2,471 90	9,509 40	17 55	6 16	23 71
Hart.....	700 00	855 00	.....	1,555 00	345 05	1,900 05	7 10	1 57	8 67
Hartford.....	700 00	1,284 00	.....	1,984 00	552 37	2,516 37	6 55	1 84	8 39
Hastings.....	1,000 00	4,007 50	.....	5,007 50	1,178 61	6,186 11	9 04	2 12	11 16
Hersey.....	700 00	600 00	.....	1,300 00	248 28	1,548 28	9 28	1 77	11 05
Hesperia.....	550 00	707 00	.....	1,257 00	250 00	1,507 00	5 76	1 15	6 91
Hillsdale.....	1,400 00	6,348 54	323 00	8,069 54	9,653 72	17,723 26	12 66	15 15	27 81
Holland.....	1,100 00	4,468 37	150 00	5,716 37	2,036 86	7,753 23	7 62	2 71	10 33
Holly.....	1,000 00	2,000 00	.....	3,000 00	914 00	3,914 00	8 95	2 73	11 68
Howell.....	1,000 00	4,539 00	.....	5,539 00	2,561 66	8,100 66	12 32	5 70	18 02
Hubbardston.....	450 00	540 00	.....	990 00	250 00	1,240 00	10 10	2 55	12 65
Hudson.....	1,000 00	2,216 00	138 75	3,354 75	1,155 04	4,509 79	11 53	3 99	15 52
Imlay City.....	900 00	2,352 25	.....	3,252 25	790 00	4,042 25	.....	.....	.....
Ionia.....	1,200 00	10,480 01	.....	11,680 01	4,224 37	15,904 38	14 54	5 26	19 80
Ishpeming.....	2,000 00	8,813 75	275 00	11,088 75	8,332 40	19,421 15	10 20	7 65	17 85
Jackson City No. 1.....	1,800 00	19,695 70	700 00	22,195 70	8,212 46	30,408 16	14 29	5 29	19 58
Jackson No. 17.....	1,500 00	7,631 38	.....	9,131 38	2,559 47	11,690 85	10 50	2 95	13 45
Jonesville.....	1,000 00	1,840 00	.....	2,840 00	1,322 00	4,162 00	12 08	5 62	17 70
Kalamazoo.....	2,100 00	23,322 70	1,000 00	26,422 70	7,221 02	33,643 72	11 86	3 11	14 47
Lakeside.....	650 00	1,995 00	250 00	2,895 00	1,052 19	3,947 19	10 09	3 66	13 75
Lakeview.....	700 00	1,250 00	.....	1,950 00	481 89	2,431 89	8 44	2 09	10 53
L'Anse.....	1,000 00	1,600 00	.....	2,600 00	1,052 02	3,652 02	18 44	4 59	23 03
Lansing.....	1,900 00	14,772 87	500 00	17,172 87	7,976 96	25,149 83	11 82	5 49	17 31
Lapeer.....	1,000 00	5,000 00	.....	6,000 00	3,440 00	9,440 00	9 77	5 51	15 28
Lawrence.....	700 00	828 00	.....	1,528 00	911 27	2,439 27	12 42	7 40	19 82
Lawton.....	700 00	798 00	.....	1,498 00	622 07	2,120 07	8 60	3 57	12 17
Lenawee Junction.....	340 00	229 50	.....	569 50	129 90	699 40	6 05	1 39	7 44
Linden.....	540 00	450 00	.....	990 00	248 39	1,238 39	9 43	2 37	11 80
Lisbon.....	540 00	270 00	.....	810 00	113 55	923 55	10 80	1 51	12 31

SUPERINTENDENT'S REPORT.

TABLE XIX.—Continued.

Districts.	Amount paid superintendent or principal.	Amount paid regular teachers.	Amount paid special teachers.	Total amount paid for instruction.	Amount paid for incidentals.	Total cost of schools.	Cost per capita for instruction.	Cost per capita for incidentals.	Total cost per capita.
Litchfield.....	\$800 00	\$891 00	.....	\$1,491 00	\$481 66	\$1,922 66	89 74	\$2 82	\$12 56
Lowell.....	800 00	2,756 50	.....	3,556 50	2,817 89	6,374 39	8 70	6 88	15 58
Luther.....	800 00	1,900 00	.....	2,700 00	773 80	3,473 80	10 84	3 10	13 94
McBride.....	575 00	540 00	.....	1,115 00	291 56	1,406 56	9 06	2 37	11 43
Manchester.....	900 00	2,280 00	.....	3,180 00	743 00	3,923 00	10 97	2 56	13 53
Manistee.....	1,500 00	17,089 06	.....	18,589 05	3,615 24	22,204 29	12 29	2 39	14 68
Manton.....	570 00	728 00	.....	1,298 00	1,408 95	2,706 95	8 43	9 14	17 57
Marine City.....	810 00	1,950 00	.....	2,760 00	1,286 59	4,046 59	9 68	4 51	14 19
Marlette.....	650 00	860 00	.....	1,510 00	399 00	1,909 00	7 58	2 00	9 58
Marquette.....	1,800 00	10,720 00	\$235 00	12,755 00	5,971 74	18,726 74	12 09	5 66	17 75
Marshall.....	1,500 00	7,652 50	575 00	9,727 50	3,946 25	13,673 75	16 43	6 66	23 09
Mason.....	1,000 00	3,192 00	.....	4,192 00	1,848 10	6,040 10	11 48	5 07	16 55
Memphis.....	600 00	560 00	.....	1,160 00	606 59	1,766 59	4 50	2 25	6 75
Michigamme.....	795 00	1,231 25	.....	2,026 25	925 80	2,952 05	9 34	4 28	13 60
Midland.....	1,150 00	4,055 00	.....	5,205 00	3,496 74	8,701 74	12 13	8 15	20 28
Milan.....	600 00	888 00	.....	1,488 00	896 00	2,384 00	.....	.....	.....
Milford.....	800 00	1,390 00	.....	2,190 00	722 61	2,912 61	7 63	2 52	10 15
Montague.....	1,000 00	2,596 88	.....	3,596 88	1,513 29	5,110 17	10 93	4 60	15 53
Monroe.....	1,200 00	3,650 00	.....	4,850 00	1,782 00	6,632 00	11 20	4 12	15 32
Mt. Morris.....	450 00	252 00	.....	702 00	115 02	817 02	.....	.....	.....
Mt. Pleasant.....	1,000 00	3,150 00	.....	4,150 00	1,751 30	5,901 30	10 10	4 28	14 38
Muir.....	700 00	675 00	.....	1,375 00	1,484 99	2,859 99	9 55	10 34	19 89
Muskegon.....	1,700 00	34,253 07	2,750 00	38,703 07	14,832 53	53,035 60	12 70	4 70	17 40
Napoleon.....	600 00	776 50	.....	1,376 50	205 48	1,581 98	.....	.....	.....
Nashville.....	760 00	1,545 00	.....	2,305 00	1,517 88	3,822 88	7 23	4 75	11 98
Negaunee.....	1,600 00	5,283 50	.....	7,583 50	7,443 05	15,026 55	9 52	9 35	18 87
Newaygo.....	900 00	1,460 00	.....	2,360 00	800 00	3,660 00	9 44	1 20	10 64
New Baltimore.....	600 00	560 00	.....	1,160 00	.....	1,160 00	11 60	.....	11 60
New Haven.....	500 00	530 00	.....	1,030 00	297 71	1,327 71	6 06	1 75	7 81
New Troy.....	330 00	179 50	.....	509 50	217 39	726 89	.....	.....	.....
Niles.....	1,500 00	8,165 00	.....	9,665 00	3,191 18	12,856 18	13 61	4 49	18 10
North Muskegon.....	1,000 00	2,379 95	.....	3,379 95	1,105 40	4,485 35	7 95	2 60	10 55
Northport.....	450 00	527 50	.....	977 50	201 59	1,179 09	7 40	1 52	8 92
Olivet.....	540 00	816 00	.....	1,356 00	274 00	1,630 00	.....	.....	.....
Onekama.....	360 00	315 00	.....	675 00	500 43	1,175 43	6 75	5 09	11 75
Onondaga.....	450 00	180 00	630 00	329 04	959 04	7 27	3 73	11 00

FINANCIAL STATISTICS.

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TABLE XIX.—Continued.

Districts.	Amount paid superintendent or principal.	Amount paid regular teachers.	Amount paid special teachers.	Total amount paid for instruction.	Amount paid for incidentals.	Total cost of schools.	Cost per capita for instruction.	Cost per capita for incidentals.	Total cost per capita.
Oscoda.....	\$900 00	\$2,879 88	.....	\$3,779 88	\$4,223 98	\$8,002 81	\$9 76	\$10 91	\$20 67
Otsego.....	950 00	1,854 00	.....	2,804 00	554 13	3,358 13	10 38	2 05	12 43
Ovid.....	1,000 00	2,220 00	.....	3,220 00	900 09	4,120 09	11 14	3 12	14 26
Oxford.....	725 00	1,200 00	.....	1,925 00	1,644 40	3,569 40	10 46	8 94	19 40
Palo.....	600 00	510 00	.....	1,110 00	274 86	1,384 86	13 88	3 43	17 31
Paris.....	425 25	288 00	.....	713 25	163 04	876 29	8 49	1 94	10 43
Parma.....	700 00	1,056 00	.....	1,756 00	1,279 12	3,035 12	9 34	6 84	16 18
Paw Paw.....	1,200 00	2,520 00	\$224 00	3,944 00	905 98	4,849 98	13 64	3 14	16 78
Petersburg.....	450 00	702 00	.....	1,152 00	347 27	1,499 27	6 44	1 94	8 38
Petoskey.....	1,050 00	3,915 00	.....	4,965 00	1,048 00	6,013 00	11 57	2 44	14 01
Pierson.....	405 00	270 00	.....	675 00	72 45	747 45	5 53	60	6 13
Pinnebog.....	550 00	180 00	.....	730 00	.....	730 00	13 52	.....	13 52
Pittsford.....	400 00	198 00	.....	598 00	152 15	750 15	5 86	1 49	7 35
Plainwell.....	900 00	2,142 00	.....	3,042 00	520 25	3,562 25	10 04	1 71	11 75
Pontiac.....	1,600 00	9,350 00	500 00	11,450 00	4,125 60	15,575 60	14 26	5 14	19 40
Port Austin.....	800 00	600 00	.....	1,400 00	.....	1,400 00	.....	.....	.....
Reading.....	735 00	1,179 00	.....	1,914 00	353 54	2,267 54	10 46	1 93	12 39
Richmond.....	675 00	720 00	.....	1,395 00	352 86	1,747 86	8 61	2 18	10 79
Rochester.....	850 00	960 00	.....	1,810 00	543 70	2,353 70	9 43	2 77	12 20
Rolland, No. 4.....	360 00	270 00	.....	630 00	50 68	680 68	7 97	64	8 61
Roscommon.....	.....	765 00	.....	765 00	143 47	908 47	5 75	1 06	6 83
St. Clair.....	900 00	3,540 00	800 00	4,740 00	3,041 74	7,781 74	9 71	6 23	15 94
St. Louis.....	1,000 00	3,319 51	90 00	4,409 51	1,397 55	5,807 06	9 88	2 97	12 35
Saline.....	900 00	1,680 00	.....	2,580 00	869 54	3,449 54	11 78	3 97	15 75
Sand Beach.....	825 00	1,675 00	.....	2,500 00	750 85	3,250 85	12 37	3 70	16 07
Saugatuck.....	650 00	1,017 00	.....	1,667 00	648 35	2,315 35	8 77	3 41	12 18
South Haven.....	1,000 00	1,974 60	.....	2,974 60	2,047 73	5,022 33	6 61	4 55	11 16
Sparta.....	700 00	650 00	.....	1,350 00	347 55	1,697 55	8 28	2 18	10 41
Spring Lake.....	1,000 00	2,606 20	.....	3,606 20	594 95	4,201 15	10 64	1 75	12 39
Springport.....	700 00	750 00	.....	1,450 00	277 21	1,727 21	14 95	2 85	17 80
Stanton.....	900 00	3,602 80	.....	4,502 80	1,835 43	6,338 23	10 30	4 20	14 50
Sturgis.....	1,000 00	2,927 00	.....	3,927 00	1,154 73	5,081 73	9 26	2 72	11 98
Tawas City.....	700 00	1,500 00	.....	2,200 00	826 96	3,026 96	8 20	3 08	11 28
Three Rivers.....	1,250 00	3,404 00	.....	4,654 00	582 53	5,236 53	13 15	1 64	14 79
Trenton.....	650 00	550 00	.....	1,200 00	332 81	1,532 81	5 22	1 01	6 23
Tustin.....	500 00	250 00	.....	750 00	174 97	924 97	12 93	3 02	15 95

SUPERINTENDENT'S REPORT.

TABLE XIX.—Continued.

Districts.	Amount paid superin- tendent or principal.	Amount paid regular teachers.	Amount paid special teachers.	Total amount paid for instruction.	Amount paid for in- cidentals.	Total cost of schools.	Cost per capita for instruction.	Cost per capita for incidentals.	Total cost per capita.
Tuscola	\$450 00	\$180 00	.....	\$630 00	\$141 67	\$771 67	.....	.....	.....
Unionville	500 00	470 00	.....	970 00	281 57	1,251 57	\$6 42	\$1 86	\$8 28
Vandalia	600 00	739 50	.....	1,339 50	337 20	1,676 70	.....	.....	.....
Vassar	1,000 00	2,540 00	.....	3,540 00	2,941 29	6,481 29	11 80	9 80	21 60
Vermontville	720 00	873 00	.....	1,593 00	326 74	1,919 74	9 95	2 04	11 99
Vernon	650 00	870 00	.....	1,520 00	658 12	2,178 12	9 74	4 22	13 96
Vicksburg	682 75	1,524 00	.....	2,186 75	581 35	2,768 10	9 50	2 53	12 03
Vriesland	480 00	300 00	.....	780 00	75 74	855 74	6 90	67	7 57
Vulcan	750 00	1,000 00	.....	1,750 00	1,619 45	3,369 45	14 83	13 72	28 55
Watrousville	800 00	270 00	.....	570 00	62 31	632 31	15 00	1 64	16 64
Webberville	500 00	460 00	.....	960 00	161 24	1,121 24	.....	.....	.....
West Bay City	1,820 00	14,680 00	.....	16,000 00	7,820 63	23,820 63	9 20	4 49	13 69
Williamston	700 00	1,486 00	.....	2,186 00	856 45	3,042 45	7 28	2 85	10 11
Zeeland	580 00	800 00	.....	1,380 00	595 24	1,975 24	5 58	2 41	7 99
Zilwaukee	750 00	1,450 00	.....	2,200 00	500 00	2,700 00	14 47	3 29	17 76

TABLE XX.

Miscellaneous Statistics of One Hundred and Eighty-nine Graded Schools, as reported by Superintendents and Principals for the School Year 1887-8.

Districts.	Total enrollment.	Average No. belonging.		No. of men teachers.	No. of women teachers.	No. of special teachers.	Average No. of pupils to each teacher.	Portion of superintendent's time given to supervision.	Number of pupils studying—				Is special instruction given in—		
									Latin.	Greek.	French.	German.	Vocal music?	Drawing?	Pennmanship?
Adrian.....	1,500	1,027	953	8	30	1	84	all	20	.....	.....	19	no	yes	yes
Ann Arbor.....	2,087	1,584	1,680	7	86	8	88	all	211	58	21	120	yes	yes	yes
Bad Axe.....	234	248	192	1	3	.....	68	2-15	.....	.....	.....	.....	no	no	no
Baraga.....	86	.....	66	1	1	.....	48	.....	.....	.....	.....	.....	no	no	no
Bay City.....	5,432	2,545	2,725	4	78	1	.....	all	46	.....	8	19	yes	no	no
Bellaire.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bellevue.....	220	220	.....	1	4	.....	44	1-18	.....	.....	.....	.....	no	no	no
Bellville.....	196	.....	121	2	1	.....	.....	.....	.....	.....	.....	.....	no	no	no
Barrien Springs.....	177	189	181	1	4	.....	28	1-5	4	.....	.....	.....	no	no	no
Beecher.....	420	262	179	1	4	.....	60	.....	.....	.....	.....	.....	no	yes	yes
Big Rapids.....	1,205	650	741	2	23	.....	36	all	15	.....	.....	12	no	no	yes
Blissfield.....	202	185	125	1	3	.....	35	1-20	8	.....	.....	.....	no	no	no
Boyer Falls.....	96	.....	.....	1	1	.....	.....	.....	.....	.....	.....	.....	no	no	no
Brighton.....	259	177	168	1	4	.....	35	.....	.....	.....	.....	.....	no	no	no
Brockway Center.....	221	208	178	1	3	.....	51	.....	.....	.....	.....	.....	no	yes	no
Brooklyn.....	240	.....	106	2	3	.....	.....	.....	.....	.....	.....	.....	no	yes	yes
Byron.....	211	152	120	1	2	.....	52	1-25	.....	.....	.....	.....	no	no	no
Byron Center.....	22	68	49	1	1	.....	34	.....	.....	.....	.....	.....	no	no	no
Cadillac.....	977	574	517	2	12	1	39	2-3	3	.....	.....	6	yes	no	no
Caledonia.....	120	.....	88	2	1	.....	.....	1-10	.....	.....	.....	.....	no	no	yes
Calumet.....	2,205	1,200	1,200	6	28	1	48	1-3	2	.....	.....	14	yes	yes	no
Cannonburg.....	90	.....	60	1	1	.....	.....	.....	.....	.....	.....	.....	no	no	no
Caro.....	487	392	302	1	7	1	41	1-3	21	5	.....	7	yes	no	no
Carsonville.....	206	.....	.....	1	1	.....	.....	.....	.....	.....	.....	.....	no	no	no
Cassovia.....	101	85	85	1	1	.....	42	.....	.....	.....	.....	.....	no	no	yes
Cassopolis.....	222	220	252	1	6	.....	42	1-12	25	2	.....	4	yes	yes	yes
Cedar Springs.....	272	204	190	1	6	.....	34	1-3	.....	.....	.....	.....	no	yes	yes
Central Mine.....	200	175	120	1	2	.....	58	.....	.....	.....	.....	.....	no	no	no
Champion.....	536	.....	201	1	7	.....	.....	1-2	.....	.....	.....	.....	yes	no	no

TABLE XX.—Continued.

Districts.	Total enrollment.					No. of women teachers.	No. of special teachers.	Average No. of pupils to each teacher.	Portion of superintendent's time given to supervision.	Number of pupils studying—				Is special instruction given in—		
										Latin.	Greek.	French.	German.	Vocal music?	Drawing?	Pennmanship?
Cheboygan.....	488	804	288	2	8	.....	38	1-3	.....	.....	.....	.....	no	yes	yes
Clarkston.....	165	149	.....	1	2	.....	49	.....	.....	.....	.....	.....	no	no	no
Clayton.....	100	85	70	1	1	.....	42	.....	.....	.....	.....	.....	no	no	no
Clinton.....	.....	223	.....	1	4	.....	52	.....	.....	.....	.....	.....	no	no	no
Clio.....	150	187	108	1	1	.....	66	.....	.....	.....	.....	.....	no	no	yes
Coldwater.....	1,188	797	764	8	20	2	36	1-3	20	4	.....	20	yes	no	yes
Columbiaville.....	163	163	.....	1	2	.....	54	.....	.....	.....	.....	.....	no	yes	yes
Concord.....	186	160	143	1	3	.....	37	1-10	.....	.....	.....	.....	no	yes	yes
Coral.....	140	.....	73	1	1	.....	.....	.....	.....	.....	.....	.....	no	no	yes
Covert.....	.....	.....	101	1	2	.....	.....	.....	.....	.....	.....	.....	no	no	no
Croswell.....	206	.....	186	1	2	.....	.....	.....	.....	.....	.....	.....	no	no	no
Crystal Falls.....	227	141	121	.....	4	.....	36	.....	.....	.....	.....	.....	no	yes	yes
Danaville.....	184	124	112	1	3	.....	31	.....	.....	.....	.....	.....	no	yes	yes
Daviesburg.....	52	20	33	1	1	.....	20	.....	.....	.....	.....	.....	no	no	no
Detroit.....	22,877	17,305	16,163	21	897	6	43	all	316	21	107	143	yes	yes	yes	
Dexter.....	206	225	209	2	6	.....	32	1-3	6	.....	.....	6	no	no	no
Douglas.....	199	151	108	1	3	.....	38	.....	.....	.....	.....	.....	no	no	no
East Blissfield.....	204	186	114	1	3	.....	34	1-4	4	.....	.....	.....	no	no	yes
East Lake.....	263	164	154	1	2	.....	54	1-4	.....	.....	.....	.....	no	no	yes
East Tawas.....	412	229	200	1	6	.....	45	1-10	.....	.....	.....	.....	no	no	no
Edwardsburg.....	147	.....	121	1	2	.....	.....	1-20	.....	.....	.....	.....	no	yes	yes
Elk Rapids.....	409	276	258	1	3	.....	24	1-5	.....	.....	.....	.....	no	no	no
Elm Hall.....	121	103	60	1	1	.....	54	.....	.....	.....	.....	.....	no	no	yes
Erie.....	150	100	74	.....	2	.....	50	.....	.....	.....	.....	.....	no	no	no
Escanaba.....	745	475	384	1	9	.....	47	1-4	.....	.....	.....	.....	no	no	no
Essexville.....	325	.....	224	2	2	.....	.....	.....	.....	.....	.....	.....	no	no	no
Fayette.....	142	100	94	1	1	.....	50	.....	.....	.....	.....	.....	no	no	no
Fenton.....	512	498	453	2	11	.....	32	1-3	20	.....	4	6	yes	yes	yes
Ferrysburg.....	183	.....	110	1	2	.....	.....	.....	.....	.....	.....	.....	no	no	no
Filer City.....	108	77	68	2	.....	.....	28	.....	.....	.....	.....	.....	no	no	yes
Flat Rock.....	161	145	113	1	2	.....	48	.....	.....	.....	.....	.....	no	no	yes
Flint.....	2,415	1,431	1,347	2	37	.....	37	all	116	4	25	49	no	yes	no
Fowlerville.....	312	245	222	1	6	.....	35	1-3	.....	.....	.....	.....	yes	yes	yes
Galesburg.....	203	163	141	1	3	.....	42	.....	.....	.....	.....	.....	no	no	no
Gaylord.....	172	120	101	2	1	.....	43	.....	.....	.....	.....	.....	no	no	yes

TABLE XX.—Continued.

Districts.	Total enrollment.	Average No. belonging.	Average daily attendance.	No. of men teachers.	No. of women teachers.	No. of special teachers.	Average No. of pupils to each teacher.	Portion of superintendent's time given to supervision.	Number of pupils studying—				Is special instruction given in—		
									Latin.	Greek.	French.	German.	Vocal music?	Drawing?	Penmanship?
Girard	71	70	52	1	1	1	35	.....	2	.....	.....	3	yes	yes	yes
Grand Ledge	252	200	220	1	3	.....	50	.....	.....	.....	.....	.....	no	no	no
Grand Rapids	12,573	7,224	6,818	6	197	3	36	all	165	16	40	54	yes	yes	yes
Grass Lake	244	186	174	1	4	.....	37	1-3	6	.....	.....	10	no	no	yes
Greenland, No. 1 .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Greenland, No. 2	48	42	35	1	1	.....	21	1-15	.....	.....	.....	.....	yes	no	yes
Greenville	901	654	626	1	14	1	43	.....	40	5	.....	22	yes	no	yes
Grindstone City	160	114	94	1	2	.....	38	.....	.....	.....	.....	.....	no	no	yes
Hadley	114	105	88	1	2	.....	35	.....	.....	.....	.....	.....	no	no	yes
Hancock	665	401	376	2	9	1	36	1-3	.....	.....	.....	16	yes	no	no
Hart	269	219	198	1	4	.....	44	1-10	.....	.....	.....	.....	no	no	yes
Hartford	301	301	137	1	4	.....	60	1-12	.....	.....	.....	.....	no	no	yes
Hastings	849	554	511	2	11	.....	42	1-3	14	.....	.....	7	no	no	no
Hersey	158	140	105	1	2	.....	46	.....	.....	.....	.....	.....	no	yes	yes
Hesperia	293	220	209	2	2	.....	55	1-20	.....	.....	.....	.....	no	yes	yes
Hilldale	891	637	601	2	17	1	34	.....	14	.....	.....	.....	yes	no	no
Holland	1,175	750	721	1	15	1	46	1-2	18	.....	.....	.....	yes	no	yes
Holly	431	335	295	1	6	.....	49	1-4	11	.....	.....	.....	no	yes	yes
Howell	1,039	449	417	1	11	.....	37	1-3	6	.....	.....	6	no	no	no
Hubbardston	133	98	89	.....	3	.....	33	.....	.....	.....	.....	.....	no	no	no
Hudson	347	291	275	1	7	1	36	1-4	19	8	.....	11	yes	yes	yes
Imlay City	453	.....	284	1	8	.....	...	3-8	.....	.....	.....	6	no	no	yes
Ionia	1,373	808	777	4	20	1	35	3-4	40	3	.....	18	yes	yes	yes
Ishpeming	1,607	1,087	963	1	18	1	57	2-3	10	.....	.....	.....	yes	no	no
Jackson City, No. 1	2,240	1,554	1,466	2	40	1	37	all	26	.....	9	37	no	yes	yes
Jackson City, No. 17	1,522	869	809	1	21	.....	40	1-2	.....	.....	.....	.....	no	no	no
Jonesville	320	235	217	1	5	.....	39	1-3	11	.....	.....	10	no	no	yes
Kalamazoo	3,841	2,325	2,193	2	60	1	38	all	93	8	13	13	yes	no	yes
Lakeside	384	237	246	1	6	1	41	.....	.....	.....	.....	.....	yes	no	no
Lakeview	248	231	215	1	4	.....	46	1-12	.....	.....	.....	15	no	no	no
L'Anse	229	141	119	1	4	.....	28	1-3	.....	.....	.....	.....	yes	no	yes
Lansing	2,079	1,452	1,313	2	37	1	38	all	55	.....	.....	26	yes	no	no
Lapeer	822	614	582	2	16	.....	34	1-2	28	.....	.....	12	no	no	no
Lawrence	179	123	103	1	3	.....	31	.....	.....	.....	.....	.....	no	no	yes
Lawton	237	174	159	1	3	.....	43	1-12	.....	.....	.....	.....	no	no	no

TABLE XX.—Continued.

Districts.	Total enrollment.	Average No. belonging.	Average daily attendance.	No. of men teachers.	No. of women teachers.	No. of special teachers.	Average No. of pupils to each teacher.	Portion of superintendent's time given to supervision.	Number of pupils studying—				Is special instruction given in—		
									Latin.	Greek.	French.	German.	Vocal music?	Drawing?	Penmanship?
Lenawee.....	99	94	67	1	1	....	47	.....	.....	.....	.....	.....	no	no	no
Linden.....	125	105	.....	1	2	.....	35	.....	8	.....	.....	.....	no	no	yes
Lisbon.....	113	74	57	1	1	.....	87	.....	.....	.....	.....	.....	no	no	no
Litchfield.....	261	153	144	1	3	.....	38	.....	.....	.....	.....	.....	no	no	no
Lowell.....	529	409	366	2	8	.....	41	1-5	.....	.....	.....	.....	no	no	yes
Luther.....	418	249	202	1	5	.....	42	1-12	.....	.....	.....	.....	no	no	yes
McBride.....	148	123	106	1	2	.....	41	.....	.....	.....	.....	.....	no	no	no
Manchester.....	366	290	279	1	8	.....	32	1-6	4	.....	.....	5	no	no	no
Manistee.....	2,666	1,512	1,445	8	86	.....	38	all	32	.....	.....	30	no	no	no
Manton.....	194	154	80	1	3	.....	38	.....	.....	.....	.....	.....	no	yes	yes
Marine City.....	403	296	247	1	8	.....	38	1-6	.....	.....	.....	.....	no	no	yes
Marlette.....	280	199	174	1	3	.....	49	1-15	.....	.....	.....	.....	no	yes	yes
Marquette.....	1,476	1,055	948	3	22	1	44	2-7	35	.....	.....	25	yes	no	no
Marshall.....	741	592	564	2	19	2	28	1-2	42	.....	.....	19	yes	no	yes
Mason.....	539	365	342	2	9	.....	34	1-2	12	.....	.....	5	no	no	no
Memphis.....	210	.....	159	1	2	.....	.....	.....	.....	.....	.....	.....	no	no	no
Michigamme.....	332	217	195	2	2	.....	54	.....	.....	.....	.....	.....	no	no	no
Midland, No. 3.....	711	429	403	1	11	.....	35	.....	.....	.....	.....	.....	no	no	no
Milan.....	255	.....	161	1	4	.....	.....	1-5	5	.....	.....	.....	no	no	no
Milford.....	332	267	260	1	5	.....	48	.....	.....	.....	.....	.....	no	no	no
Montague.....	594	329	299	2	6	.....	41	.....	8	.....	.....	.....	no	no	no
Monroe.....	556	433	400	1	11	.....	36	1-2	42	7	.....	13	no	no	no
Mt. Morris.....	113	.....	.....	1	1	.....	.....	.....	.....	.....	.....	.....	no	no	yes
Mt. Pleasant.....	554	411	352	1	9	.....	41	1-5	.....	.....	.....	14	yes	yes	yes
Muir.....	203	144	.....	1	3	.....	36	1-8	5	.....	.....	.....	no	yes	yes
Muskegon.....	4,823	3,044	2,830	6	76	4	38	all	36	.....	.....	.....	yes	yes	yes
Napoleon.....	127	.....	98	1	2	.....	.....	.....	.....	.....	.....	.....	no	no	yes
Nashville.....	260	240	.....	1	5	.....	40	1-4	4	.....	.....	6	no	no	no
Negaunee.....	984	796	717	1	15	.....	49	1-2	11	.....	.....	.....	no	no	no
Newaygo.....	295	250	193	1	4	.....	50	.....	.....	.....	.....	.....	no	no	yes
New Baltimore.....	145	100	95	1	2	1	33	.....	.....	.....	.....	7	no	yes	yes
New Haven.....	204	170	136	1	2	.....	56	.....	.....	.....	.....	.....	no	no	no
New Troy.....	110	.....	.....	1	1	.....	.....	.....	.....	.....	.....	.....	no	no	no
Niles.....	966	710	660	2	20	.....	32	3-4	23	.....	.....	8	no	no	no
North Muskegon.....	520	425	405	3	4	.....	60	2-3	.....	.....	.....	.....	yes	no	no

TABLE XX.—Continued.

Districts.	Total enrollment.	Average number belonging.	Average daily attendance.	No. of men teachers.	No. of women teachers.	No. of special teachers.	Average No. of pupils to each teacher.	Portion of superintendent's time given to supervision.	Number of pupils studying—				Is special instruction given in—		
									Latin.	Greek.	French.	German.	Vocal music?	Drawing?	Pennmanship?
Northport	132	132	100	—	3	—	44	—	—	—	—	—	yes	no	yes
Olivet	231	—	130	1	3	—	—	—	14	—	—	—	no	no	yes
Onekama	127	100	85	—	2	—	50	—	—	—	—	5	no	no	yes
Onondaga	88	88	72	1	1	—	44	—	—	—	—	—	no	no	yes
Oscoda	612	337	330	1	9	—	33	1-4	—	—	—	—	no	no	no
Otsego	498	270	254	1	6	—	39	1-4	—	—	—	—	no	no	no
Ovid	435	239	233	1	7	—	33	1-4	5	—	—	—	no	no	no
Oxford	233	134	—	1	4	—	37	1-15	—	—	—	—	no	no	yes
Palo	99	80	80	1	2	—	23	—	—	—	—	—	no	no	yes
Paris	84	84	73	1	1	—	42	—	—	—	—	—	no	no	yes
Parma	235	137	173	1	3	—	47	1-3	—	—	—	—	no	no	yes
Paw Paw	331	239	270	1	3	2	32	1-2	20	—	—	20	no	no	yes
Petersburg	212	194	112	1	3	—	43	1-3	—	—	—	—	no	yes	yes
Petoskey	619	429	411	1	11	—	35	1-3	—	—	—	—	no	yes	yes
Pierson	123	122	63	1	1	—	61	—	—	—	—	—	no	no	yes
Pinebog	141	103	—	1	1	—	54	1-15	—	—	—	—	no	yes	yes
Pittsford	107	103	53	1	1	—	51	—	—	—	—	—	no	no	no
Plainwell	370	303	233	1	7	—	33	1-5	4	—	—	—	yes	no	no
Pontiac	1,037	302	731	3	20	1	35	2-3	51	7	5	29	yes	no	no
Port Austin	133	—	121	1	2	—	—	—	—	—	—	—	no	yes	yes
Reading	205	133	107	1	4	—	33	—	—	—	—	—	no	no	no
Richmond	201	133	143	1	3	—	40	—	—	—	—	—	no	no	no
Rochester	242	192	140	1	3	—	43	—	9	—	—	8	no	no	no
Rolland No. 4	89	79	75	1	1	—	39	—	—	—	—	—	no	yes	yes
Roscommon	137	133	83	—	2	—	63	—	—	—	—	—	no	no	no
St. Clair	773	433	433	2	10	1	40	1-7	12	—	5	9	yes	no	no
St. Louis	752	470	413	2	9	1	43	1-2	14	—	—	—	yes	no	no
Saline	293	219	209	1	5	—	37	—	3	—	—	8	no	no	yes
Sand Beach	309	202	202	1	5	—	34	2-5	3	—	—	—	no	yes	yes
Saugatuck	343	190	171	1	4	—	33	—	—	—	—	—	no	no	no
South Haven	450	450	332	1	7	—	53	1-3	—	—	—	8	no	no	no
Sparta	204	132	103	1	2	—	54	—	3	—	—	—	no	no	no
Spring Lake	633	412	339	1	3	—	43	1-3	4	—	—	7	no	no	no
Springport	113	97	—	1	3	—	33	—	—	—	—	—	yes	yes	yes
Stanton	591	433	395	1	10	—	39	1-12	6	—	—	—	no	no	no

TABLE XX.—Continued.

		Average number belong- ing.	Average daily attend- ance.	No. of men teachers.	No. of women teachers.														
Sturgis.....	473	434	300	1	9	43	1	3				15	no	no	no				
Tawas City.....	303	303		1	4	53							no	no	yes				
Three Rivers.....	499	854	309	1	10	32	1-4	10				7	yes	yes	yes				
Trenton	301	300	175	1	3	73							no	no	no				
Tustin.....	105	59	50	1	1	39							no	no	no				
Tuscola.....	134		73	1	1								no	no	no				
Unionville.....	151	151	89	1	2	80							no	no	no				
Vandalla.....				1	3								no	no					
Vassar.....	474	300	373	1	3	33	1-3	3				1	no	yes	yes				
Vermontville.....	247	160	143	1	3	40							no	no	yes				
Vernon.....	197	150	143	1	3	39		3					no	no	no				
Vicksburg.....	311	290	197	1	5	39							no	no	no				
Vriesland.....	113	113	71	1	1	55							yes	yes	yes				
Vulcan.....	170	113	90	1	3	39							no	no	yes				
Watrousville.....	77	77		1	1	36							no	no	no				
Webberville.....	160			1	3								no	no	no				
West Bay City	2,705	1,730		4	36	45	5-8	25				3	no	no	no				
Williamston.....	300	301	331	1	5	50	1-12	3					no	no	yes				
Zeeland.....	377	247	303	1	3	63							yes	no	yes				
Zilwaukee.....	340	193	111	3	3	30							yes	no	yes				

TABLE XXI.

Statistics of the High School Department of One Hundred and Forty-five Graded School Districts, compiled from Reports of Superintendents and Principals for the School Year 1887-8.

Districts.	Enrollment in de- partment.	Average No. be- longing.	Average daily at- tendance.	No. of men teach- ers.	No. of women teachers.	Av. No. of pupils to each teacher.	No. of non-real- dent pupils.	Average age of class graduated.		Cost per capita for instruction.	Cost per capita for incidentals.	Total cost per cap- ita.	
								Years.	Months.				
Adrian.....	148	120	114	1	1-2	4	27	20	18	\$28 81	\$5 00	\$33 81
Ann Arbor.....	608	458	445	6	6	88	280	19	8	24 80	4 67	29 47	
Bad Axe.....	55	40	81	1	.....	25	15	.....	.....	16 25	3 01	19 26
Bay City.....	230	172	163	1	7	31	8	19	.....	81 14	8 48	34 62
Bellevue.....	44	44	.....	1	1	23	.....	.....	.....	.....	.....	.....
Bellville.....	70	.....	45	1	.....	.....	33	17	.....	.....	.....	.....
Barrien Springs....	28	20	19	1	1	10	2	16	6	4 85	1 83	6 18	
Big Rapids.....	90	75	68	1	3	19	.....	17	.....	24 00	3 05	27 05
Blissfield.....	40	30	28	1	.....	30	.....	.....	.....	.....	.....	.....
Brighton.....	104	55	51	1	1	28	.....	.....	.....	.....	.....	.....
Brockway Center..	81	49	43	1	.....	49	33	.....	.....	.....	.....	.....
Brooklyn.....	55	.....	.....	2	.....	.....	.....	19	.....	.....	.....	.....
Byron.....	84	46	40	1	.....	46	.....	.....	.....	15 21	1 38	16 59
Cadillac.....	57	41	39	2-3	2	20	6	.....	.....	31 04	12 43	43 46
Calumet.....	67	54	52	3	1	36	4	16	4	.....	.....	.....
Caro.....	102	77	74	5-6	1	26	27	19	.....	20 82	3 53	24 40
Cassopolis.....	76	60	56	1	1	30	22	.....	.....	.....	.....	.....
Cedar Springs.....	71	42	38	1	1	21	.....	18	.....	.....	.....	.....
Champion.....	37	.....	28	1	1	.....	.....	17	.....	.....	.....	.....
Cheboygan.....	81	51	50	1	1	26	14	.....	.....	.....	.....	.....
Clarkston.....	61	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Coldwater.....	120	88	87	1	1-2	22	34	.....	.....	32 68	5 43	38 16
Columbiaville.....	44	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Concord.....	45	36	34	1	.....	36	.....	18	.....	.....	.....	.....
Covert.....	.....	.....	43	1	.....	.....	2	.....	.....	.....	.....	.....
Croswell.....	28	24	24	1	.....	24	.....	.....	.....	.....	.....	.....
Crystal Falls.....	30	26	24	.....	1	26	.....	.....	.....	26 79	7 33	34 17
Dansville.....	24	20	20	1	.....	20	.....	15	.....	.....	.....	.....
Detroit.....	859	644	625	8	17	26	.....	.....	.....	35 11	6 70	41 81
Dexter.....	62	46	44	2	1	15	24	19	.....	23 00	2 00	25 00
Douglas.....	115	89	55	1	1	44	.....	.....	.....	.....	.....	.....
East Blissfield.....	76	46	41	1	1	23	.....	.....	.....	21 74	3 21	24 95

TABLE XXI.—Continued.

Districts.	Enrollment in department.	Average No. belonging.	Average daily attendance.	No. of men teachers.	No. of women teachers.	Av. No. of pupils to each teacher.	No. of non-graduate pupils.	Average age of class graduated.		Cost per capita for instruction.	Cost per capita for incidental.	Total cost per capita.
								Years.	Months.			
East Tawas.....	47	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Edwardsburg.....	42	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Elk Rapids.....	57	39	35	1	1	19	8	.....	.....	\$15 06	\$4 99	\$20 05
Escanaba.....	63	54	43	1	1	27	.....	17	.....	.....	.....	.....
Essexville.....	41	.....	26	1	1	.....	.....	.....	.....	15 75	8 75	19 50
Fenton.....	71	67	60	2	1	22	13	15	.....	.....	.....	.....
Ferrysburg.....	49	.....	23	1	.....	.....	.....	.....	.....	.....	.....	.....
Flat Rock.....	38	37	32	1	.....	37	18	14	.....	.....	.....	.....
Flint.....	319	200	195	1	6	23	50	18	.....	20 20	.....	20 20
Fowlerville.....	54	51	47	1	1	26	7	19	.....	.....	.....	.....
Galesburg.....	53	40	35	1	.....	40	26	.....	.....	19 10	2 72	21 82
Gaylord.....	53	37	37	1	.....	37	2	.....	.....	.....	.....	.....
Grand Ledge.....	82	.....	.....	1	.....	.....	13	.....	.....	.....	.....	.....
Grand Rapids.....	763	537	512	3 1-2	16 1-2	27	81	18	2	.....	.....	.....
Grass Lake.....	79	68	67	1	1	34	40	19	.....	18 50	1 45	19 95
Greenville.....	164	139	133	1 2-3	3	23	27	19	.....	23 10	3 47	26 57
Grindstone City.....	50	.....	30	1	.....	.....	.....	.....	.....	.....	.....	.....
Hadley.....	56	47	41	1	.....	47	25	.....	.....	.....	.....	.....
Hancock.....	42	32	30	1 2-3	.....	13	8	17	8	61 37	6 16	67 53
Hart.....	65	52	39	1	1	26	21	17	10	12 11	1 57	13 68
Hartford.....	30	.....	59	1	1	.....	12	17	.....	.....	.....	.....
Hastings.....	204	103	104	1	2	33	94	18	7	13 42	3 12	15 54
Hersey.....	45	40	30	1	.....	40	.....	14	.....	.....	.....	.....
Hesperia.....	41	27	25	1	.....	27	5	17	.....	2 15	40	2 55
Hillsdale.....	156	123	120	2	4	21	43	18	9	23 04	15 14	38 18
Holland.....	75	60	56	1-3	2	30	4	18	.....	16 06	2 71	19 37
Holly.....	92	75	60	1	1	37	35	17	.....	.....	.....	.....
Howell.....	64	44	41	1	1	22	45	19	.....	.....	.....	.....
Hubbardston.....	43	30	28	.....	1	30	8	17	.....	10 10	2 55	12 65
Hudson.....	88	70	68	1	2	23	29	17	9	18 40	3 98	22 38
Imlay City.....	55	.....	.....	1	1	.....	14	15	.....	.....	.....	.....
Ionia.....	176	125	122	2	4	25	76	20	.....	.....	.....	.....
Ishpeming.....	44	.....	.....	1	1	.....	.....	17	.....	.....	.....	.....
Jackson No. 1.....	241	189	181	1 1-3	5 1-2	29	38	18	8	23 06	5 29	23 95
Jackson No. 17.....	62	46	42	1	1	23	3	.....	.....	20 94	2 95	23 89
Jonesville.....	67	53	50	2-3	1	29	26	18	6	18 38	5 62	24 00
Kalamazoo.....	206	187	184	1 1-3	5	31	18	18	11	21 83	3 11	24 94

TABLE XXI.—Continued.

Districts.	Enrollment in department.	Average No. belonging.	Average daily attendance.	No. of men teachers.	No. of women teachers.	Av. No. of pupils to each teacher.	No. of non-resident pupils.	Average age of class graduated.		Cost per capita for instruction.	Cost per capita for incidentals.	Total cost per capita.
								Years.	Months.			
Lakeview.....	42	40	37	1	.....	40	13	.....	.....	\$17 50	\$2 09	\$19 59
L'Anse.....	24	20	18	1	.....	20	.....	18	.....	18 44	4 59	13 03
Lansing.....	165	131	125	2	5	22	22	18	.....	.....	5 49	.....
Lapeer.....	97	78	68	2	2 1-2	31	24	18	.....	23 02	5 51	28 53
Lawrence.....	74	49	36	1	1	25	20	19	.....	20 16	7 40	27 56
Lawton.....	76	64	60	1	1	32	26	18	.....	.....	8 57	.....
Litchfield.....	101	49	49	1	1	25	29	17	.....	18 40	2 81	21 21
Lowell.....	117	84	66	1	1	42	24	16	.....	14 23	6 88	21 11
Luther.....	89	55	45	1	2	18	9	14	.....	.....	8 10	.....
McBride.....	52	48	41	1	.....	48	.....	.....	.....	14 00	2 37	16 37
Manchester.....	59	44	43	1	2	22	23	17	.....	26 98	2 56	29 54
Manistee.....	104	83	79	2	1	22	3	19	8	.....	2 89	.....
Manton.....	37	32	.....	1	.....	32	7	15	.....	.....	9 14	.....
Marine City.....	66	40	39	1	2	20	4	16	.....	22 30	4 51	26 81
Marlette.....	90	67	59	1	1	33	12	18	6	.....	2 00	.....
Marquette.....	110	92	85	1	3	25	5	.....	.....	.....	5 66	.....
Marshall.....	10	69	68	2	2	17	23	18	.....	46 38	6 66	53 04
Mason.....	73	.....	.....	1	2	.....	34	.....	.....	15 33	5 07	20 40
Memphis.....	73	.....	.....	1	.....	.....	17	.....	.....	.....	2 25	.....
Midland.....	56	39	37	1	1	19	23	.....	.....	23 81	8 15	31 46
Milan.....	32	.....	17	1	.....	.....	9	16	.....	.....	.....	.....
Milford.....	90	58	53	3-4	2-5	50	32	18	.....	12 76	2 39	15 15
Montague.....	35	26	24	1	.....	23	6	16	8	.....	4 60	.....
Monroe.....	88	80	78	1-2	2 1-2	26	62	18	.....	.....	4 12	.....
Mt. Pleasant.....	72	58	46	1	1	29	11	.....	.....	25 00	4 23	29 23
Muir.....	40	30	.....	1	.....	30	10	18	.....	9 55	10 34	19 89
Muskegon.....	173	144	140	2	3	29	9	.....	.....	25 20	4 75	29 95
Napoleon.....	43	43	30	1	.....	43	.....	17	.....	.....	.....	.....
Nashville.....	62	38	35	1	1	19	21	18	6	.....	4 75	.....
Negaunee.....	51	45	42	1	2	15	.....	19	.....	.....	9 35	.....
Newaygo.....	36	25	20	1	.....	25	10	17	.....	.....	1 20	.....
New Baltimore.....	54	36	33	1	.....	36	5	18	.....	16 66	.....	16 66
New Haven.....	67	64	51	1	.....	64	7	.....	.....	.....	1 75	.....
Niles.....	91	70	67	1	2	25	14	.....	.....	21 40	4 49	25 89
North Muskegon.....	80	45	40	1	1	23	8	15	.....	12 35	2 60	14 95
Northport.....	47	.....	32	.....	1	.....	7	.....	.....	.....	1 52	.....
Olivet.....	56	.....	32	1	.....	.....	7	.....	.....	.....	.....	.....
Oscoda.....	55	41	31	1	1-2	27	.....	15	.....	26 94	10 91	37 85

TABLE XXI.—Continued.

Districts.	Enrollment in department.	Average No. belonging.	Average daily attendance.	No. of men teachers.	No. of women teachers.	Av. No. of pupils to each teacher.	No. of non-resident pupils.	Average age of class graduated.		Cost per capita for instruction.	Cost per capita for incidentals.	Total cost per capita.
								Years.	Months.			
Otsego.....	203	97	93	1	2	32	45	19	.....	.....	\$2 05	.....
Ovid.....	63	33	23	1	1	20	.....	18	.....	\$12 50	3 12	\$15 62
Oxford.....	74	53	.....	1	1	27	9	18	6	.....	3 94	.....
Palo.....	43	.....	37	1	.....	.....	26	17	6	.....	3 43	.....
Parma.....	63	59	.....	1	.....	59	29	18	.....	12 00	6 84	18 84
Paw Paw.....	127	88	80	1	3	22	56	.....	.....	27 08	3 14	30 22
Petersburg.....	35	29	20	1	.....	29	6	18	.....	.....	1 94	.....
Petoskey.....	103	77	72	1	2	38	18	16	.....	.....	2 44	.....
Plainwell.....	101	81	81	1	1	40	5	17	.....	.....	1 71	.....
Pontiac.....	122	100	98	1 1-3	3	23	30	18	5	27 30	5 14	32 44
Port Austin.....	45	.....	25	1	.....	.....	8	18	.....	.....	.....	.....
Reading.....	39	30	23	1	.....	30	7	17	.....	.....	1 93	.....
Richmond.....	50	43	43	1	.....	43	9	17	4	.....	2 18	.....
Rochester.....	77	53	41	1	1	29	12	16	.....	20 35	2 77	23 12
St. Clair.....	55	42	36	1	1 1-3	31	10	19	.....	37 65	6 23	43 88
St. Louis.....	70	53	50	1	1	26	7	.....	.....	16 95	2 97	19 92
Saline.....	40	31	30	1	1	16	13	18	.....	33 57	3 97	42 54
Sand Beach.....	26	19	19	1	1	9	6	18	8	44 47	3 70	48 17
Saugatuck.....	59	27	25	1	.....	27	2	.....	.....	.....	3 41	.....
South Haven.....	95	.....	.....	1	1	.....	35	14	.....	.....	4 55	.....
Sparta.....	60	.....	33	1	.....	.....	13	17	.....	.....	2 13	.....
Spring Lake.....	53	37	31	1	1	19	6	17	.....	9 33	1 20	10 52
Springport.....	27	22	22	1	.....	22	17	18	.....	.....	2 35	.....
Stanton.....	60	44	42	1	1	21	6	16	.....	.....	4 20	.....
Sturgis.....	33	35	73	1	2	27	40	18	.....	12 10	2 72	14 82
Tawas City.....	42	.....	.....	1	.....	.....	.....	.....	.....	.....	3 08	.....
Three Rivers.....	33	72	69	1	2	36	14	18	.....	.....	1 64	.....
Unionville.....	31	.....	23	1	.....	.....	8	17	.....	.....	1 36	.....
Vandalia.....	.....	.....	.....	1	1	.....	23	.....	.....	.....	.....	.....
Vassar.....	62	33	35	1	1	19	19	17	.....	23 95	9 30	33 75
Vermontville.....	53	35	30	1	.....	35	30	.....	.....	.....	2 04	.....
Vernon.....	47	33	34	1	.....	36	23	18	.....	18 06	4 23	22 23
Vicksburg.....	100	60	50	1	1	30	39	17	.....	16 30	2 53	18 33
Vulcan.....	25	22	13	1	.....	22	.....	15	.....	.....	13 73	.....
Webberville.....	49	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
West Bay City.....	32	30	.....	2	1	20	19	.....	.....	.....	4 49	.....
Williamston.....	92	75	63	1	1	37	31	17	.....	.....	2 35	.....
Zilwaukee.....	70	33	29	1	.....	33	.....	16	.....	.....	3 29	.....

TABLE XXII.

Statistics of Grammar Department of One Hundred and Seventy-nine Graded School Districts, compiled from reports of Superintendents and Principals for the school year 1887-8.

Districts.	Enrollment in department.	Average No. belonging.	Average daily attendance.	Number of men teachers.	Number of women teachers.	Av. No. of pupils to each teacher.	No. of non-resident pupils.	Av. age of class promoted.		Cost per capita for instruction.	Cost per capita for incidentals.	Total cost per capita.
								Years.	Months.			
Adrian.....	509	380	355	5-12	11	35	13	14	....	\$14 22	\$5 00	\$19 22
Ann Arbor.....	634	502	487	1	14	37	36	14	8	13 75	4 67	18 42
Bad Axe.....	83	60	49	.....	1	60	4	.....	.....	5 00	3 02	8 02
Bay City.....	1,377	726	686	1	24	29	6	14	1	14 60	3 48	18 08
Bellevue.....	51	51	.....	.....	1	51	.....	.....	.....	.....	.....	.....
Belleville.....	61	.....	38	1	.....	.....	.....	14	4	.....	.....	.....
Berrien Springs..	84	71	68	.....	2	36	.....	14	.....	8 74	1 83	10 57
Bessemer.....	50	40	26	1	.....	40	.....	.....	.....	21 25	14 92	36 17
Big Rapids.....	240	100	75	.....	7	14	.....	.....	.....	8 02	3 05	11 07
Blissfield.....	70	48	43	.....	1	48	.....	.....	.....	.....	72	.....
Boyne Falls.....	40	.....	.....	1	.....	.....	.....	.....	.....	.....	1 09	.....
Brighton.....	66	52	47	.....	1	52	.....	.....	.....	.....	5 17	.....
Brockway Center	73	60	40	.....	1	60	4	.....	.....	.....	2 22	.....
Brooklyn.....	59	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
Byron.....	58	52	39	.....	1	52	2	12	6	5 76	1 33	7 14
Byron Center.....	33	22	17	1	.....	23	.....	.....	.....	.....	2 23	.....
Cadillac.....	143	93	84	2-3	2	40	1	.....	.....	11 60	12 42	24 02
Caledonia.....	53	.....	43	2	.....	.....	16	.....	.....	.....	.....	.....
Calumet.....	316	243	209	2	3	55	.....	14	10	.....	6 52	.....
Cannonsburg.....	50	.....	20	1	.....	.....	.....	.....	.....	.....	.....	.....
Caro.....	96	79	71	1-12	2	39	6	14	.....	11 05	3 58	14 63
Carsonville.....	75	34	.....	1	.....	34	.....	.....	.....	.....	.....	.....
Cassovia.....	50	50	30	1	.....	50	.....	.....	.....	.....	2 23	.....
Cassopolis.....	98	70	65	.....	2	35	3	.....	.....	.....	4 68	.....
Cedar Springs.....	95	58	54	.....	2	29	.....	15	.....	.....	3 36	.....
Central Mine.....	60	50	34	1	.....	50	.....	.....	.....	.....	3 30	.....
Champion.....	123	104	104	.....	2	52	.....	13	.....	.....	7 36	.....
Cheboygan.....	30	45	44	1	.....	45	3	.....	.....	.....	2 31	.....
Clayton.....	40	35	30	1	.....	35	.....	.....	.....	13 70	1 75	15 45
Clarkston.....	43	.....	.....	.....	1	.....	.....	.....	.....	.....	2 37	.....
Cllo.....	67	58	43	1	.....	58	4	.....	.....	.....	84	.....
Coldwater.....	420	302	293	1	3	33	14	.....	.....	9 53	5 43	15 01

TABLE XXII.—Continued.

Districts.	Enrollment in department.	Average No. belonging.	Average daily attendance.			Av. No. of pupils to each teacher.	No. of non-resident pupils.	Av. age of class promoted.		Cost per capita for instruction.	Cost per capita for incidentals.	Total cost per capita.
								Years.	Months.			
Columbiaville.....	58				1						28 99	
Concord.....	37	31	30		1	III		14			8 10	
Coral.....	70	70	30	1		70	3					
Croswell.....	30	65	65		1	65		11			70	
Crystal Falls.....	58	35	29		1	35				\$12 86	7 38	\$20 24
Dansville.....	30	23	26		1	23					4 68	
Davisburg.....	27	19	17	1		19	5			11 10	1 94	14 04
Detroit.....	5,296	4,622	4,375	11	126	35				17 92	6 70	24 62
Dexter.....	89	69	65		2	85	3	15	5	8 16	2 00	10 16
Douglas.....	40	33	30		1	33						
East Blissfield.....	47	35	29		1	35				13 77	3 21	16 98
East Lake.....	102	69	61	1		69	2			12 84	2 08	15 87
East Tawas.....	68	39	55		3	28					2 81	
Edwardsburg.....	45				1						4 15	
Elk Rapids.....	111	88	84		3	39				12 70	4 99	17 69
Elm Hall.....	53		28	1			7				1 65	
Escanaba.....	287	199	165		4	49		14			2 29	
Esserville.....	135		43		1					6 62	3 75	10 37
Fayette.....	62	■	36	1		40				10 14	1 35	11 49
Fenton.....	140	III	125		4	33					2 06	
Ferrysburg.....	49		34		1							
Filer City.....	70	54	47	1		54					13 93	
Flat Rock.....	49	43	40		1	43	14	11			2 75	
Flint.....	834	474	457		12	39	III	15		10 06		10 06
Fowlerville.....	96	76	■		3	38		14			2 49	
Galesburg.....	104	87	77		3	■	14			6 62	2 72	9 34
Gaylord.....	57	39	39		1	39					3 50	
Girard.....	26	35	25	1	1	20	8				1 79	
Grand Ledge.....	30				1						2 35	
Grand Rapids.....	3,548	2,231	2,105	1	57 1-3	38	68	14	■		■	
Grass Lake.....	58	45	43		1	45		14		7 90	1 45	9 35
Greenland, No. 1.....	37	34	25	1		34		A			3 84	
Greenland, No. 2.....	25	23	17	1		23					3 95	
Greenville.....	242	304	196		5	41	3			11 00	3 47	14 47
Grindstone City.....	45		29		1						1 08	
Hadley.....	22	22	19		1	22					1 80	
Hancock.....	160	125	120	1-3	3	40	12	14	2	16 79	6 16	23 95

TABLE XXII.—Continued.

Districts.	Enrollment in department.	Average No. belonging.	Average daily attendance.	No. of men teachers.	No. of women teachers.	Av. No. of pupils to each teacher.	No. of non-resident pupils.	Av. age of class promoted.		Cost per capita for instruction.	Cost per capita for incidentals.	Total cost per capita.
								Years.	Months.			
Hart	108	85	81	.....	1 1-2	56	5	18	1	\$5 05	\$1 57	\$6 62
Hartford	89	.....	26	.....	1	.....	.....	.....	.....	.....	1 84	.....
Hastings	216	176	162	1	3	44	8	14	.....	7 75	2 12	9 87
Hersey	51	48	35	.....	1	48	.....	12	.....	.....	1 77	.....
Hesperia	115	74	61	1	1-2	49	1	10	.....	1 45	1 15	2 60
Hillsdale	292	230	221	.....	5	46	.....	14	6	9 05	15 14	24 19
Holland	350	270	265	1-3	5	54	6	14	.....	7 44	2 71	10 15
Holly	151	110	100	.....	2	53	3	.....	.....	.....	2 73	.....
Howell	346	145	139	.....	4	36	.....	.....	.....	.....	5 70	.....
Hubbardston	41	32	28	.....	1	32	2	.....	.....	10 10	2 55	12 65
Hudson	117	105	98	.....	2	52	5	14	3	9 15	3 99	13 14
Imlay City	169	104	.....	.....	2	52	9	.....	.....	.....	.....	.....
Ionia	361	223	217	2	4	37	38	.....	.....	.....	5 26	.....
Ishpeming	390	.....	.....	.....	6	.....	.....	13	.....	.....	7 65	.....
Jackson No. 1	575	441	416	1-3	12 1-2	35	21	.....	.....	15 42	5 29	20 71
Jackson No. 17	330	225	216	.....	7	32	10	.....	.....	12 62	2 95	15 57
Jonesville	104	80	74	1-6	2	40	3	14	6	11 08	5 62	16 70
Kalamazoo	1,113	630	605	1-3	18	35	24	15	8	14 66	3 11	17 77
Lakeside	67	43	36	1	1	26	3	16	8	.....	3 66	.....
Lakeview	92	89	82	.....	2	44	1	12	.....	7 30	2 09	9 39
L'Anse	49	37	32	.....	1	37	.....	10	.....	18 44	4 59	13 03
Lansing	683	517	473	.....	12	43	16	15	1	.....	5 49	.....
Lapeer City	220	166	144	.....	5	33	8	.....	.....	10 46	5 51	15 97
Lawrence	51	37	34	.....	1	37	3	12	.....	7 78	7 40	15 18
Lawton	51	41	37	.....	1	41	5	18	.....	.....	3 57	.....
Lenawee Junction	44	42	31	1	.....	42	2	.....	.....	.....	1 39	.....
Lisbon	59	36	31	1	.....	36	12	.....	.....	14 86	1 51	16 37
Litchfield	57	48	44	.....	1	48	.....	.....	.....	5 04	2 81	7 85
Lowell	141	130	125	.....	4	32	2	.....	.....	9 23	6 88	16 11
Luther	172	96	81	.....	2	48	.....	12	.....	.....	3 10	.....
McBride	39	30	29	.....	1	30	.....	12	.....	12 00	2 37	14 37
Manchester	93	74	72	.....	2 1-4	33	10	.....	.....	10 85	2 56	12 91
Manistee	1,252	756	723	.....	19	40	3	14	2	.....	2 39	.....
Manton	100	81	.....	.....	2	40	1	12	.....	.....	9 14	.....
Marine City	115	91	79	.....	3	31	3	.....	.....	10 24	4 51	14 75
Marlette	90	57	51	.....	1	57	.....	.....	.....	.....	2 00	.....
Marquette	418	215	196	.....	4	54	.....	.....	.....	.....	5 66	.....

TABLE XXII.—Continued.

Districts.	Enrollment in department.	Average No. belonging.	Average daily attendance.	No. of men teachers.	No. of women teachers.	Av. No. of pupils to each teacher.	No. of non-resident pupils.	Av. age of class promoted.		Cost per capita for instruction.	Cost per capita for incidentals.	Total cost per capita.
								Years.	Months.			
Marshall.....	305	255	246	.....	9	28	12	14	8	\$14 56	\$6 66	\$21 22
Mason.....	186	.....	.....	.....	8	.....	4	.....	.....	8 21	5 07	13 28
Memphis.....	78	.....	.....	.....	1	.....	.....	.....	.....	.....	2 25	.....
Michigamme.....	71	52	48	2	.....	26	.....	.....	.....	.....	4 28	.....
Midland.....	200	184	127	.....	4	45	.....	.....	.....	9 50	5 87	15 37
Milan.....	109	.....	72	.....	2	.....	.....	.....	.....	.....	.....	.....
Milford.....	149	116	103	1-4	1 17-20	55	17	14	6	6 25	2 52	8 77
Montague.....	184	85	78	.....	2	43	2	.....	.....	.....	4 60	.....
Monroe.....	178	128	120	.....	8 1-2	35	.....	.....	.....	.....	4 12	.....
Mt. Pleasant.....	119	97	91	.....	8	32	.....	.....	.....	10 82	4 26	15 08
Muir.....	46	31	.....	.....	1	34	.....	.....	.....	9 55	10 34	19 89
Muskegon.....	1,165	702	682	2	18	35	19	.....	.....	12 50	4 70	17 20
Napoleon.....	25	.....	20	.....	1	.....	.....	.....	.....	.....	.....	.....
Nashville.....	48	.....	.....	.....	1	.....	2	.....	.....	.....	4 75	.....
Negaunee.....	207	168	159	1	4	34	.....	14	.....	.....	9 35	.....
Newaygo.....	59	51	41	.....	1	51	.....	.....	.....	.....	1 20	.....
New Baltimore.....	48	30	28	.....	1	30	.....	11	.....	9 30	.....	9 30
New Haven.....	72	47	41	.....	1	47	.....	.....	.....	.....	1 75	.....
New Troy.....	58	35	.....	1	.....	35	10	.....	.....	.....	.....	.....
Niles.....	287	207	199	.....	6	35	7	.....	.....	10 70	8 50	14 20
North Muskegon...	130	120	115	.....	2	60	.....	11	6	5 14	2 60	7 74
Northport.....	45	.....	38	.....	1	.....	.....	.....	.....	.....	1 52	.....
Olivet.....	99	76	69	.....	2	38	.....	.....	.....	.....	.....	.....
Onekama.....	52	42	40	.....	1	42	.....	.....	.....	8 57	5 00	13 57
Onondaga.....	45	45	37	1	.....	45	5	.....	.....	4 09	3 73	7 82
Oscoda.....	120	87	79	.....	2	43	.....	14	6	10 27	10 91	21 18
Otsego.....	140	87	81	.....	2	43	1	13	.....	.....	2 05	.....
Ovid.....	96	71	67	.....	2	35	.....	11	6	9 01	3 12	12 13
Oxford.....	50	37	.....	.....	1	37	3	11	6	.....	8 94	.....
Palo.....	30	.....	23	.....	1	.....	1	11	.....	.....	3 43	.....
Paris.....	48	48	.....	1	.....	48	.....	.....	.....	.....	1 94	.....
Parma.....	56	39	.....	.....	1	39	17	15	.....	7 43	6 84	14 27
Paw Paw.....	111	89	87	.....	2 1-2	36	23	.....	.....	4 21	3 14	7 35
Petersburg.....	44	.....	23	.....	1	.....	.....	10	.....	.....	1 94	.....
Petoskey.....	212	171	159	.....	3	57	6	14	.....	.....	2 44	.....
Pierson.....	42	42	23	1	.....	42	.....	.....	.....	.....	60	.....
Pinnebog.....	60	48	.....	1	.....	48	.....	.....	.....	9 17	.....	9 17

TABLE XXII.—Continued.

		Average No. be- longing.	Average daily at- tendance.	No. of men teach- ers.	No. of women teach- ers.	Av. No. of pupils to each teacher.	No. of non-resident pupils.	Av. age of class promoted.		Cost per capita for instruction.	Cost per capita for incidentals.	Total cost per capita.
								Years.	Months.			
Plainwell	99	59	45	1		52	10				\$1 49	
Pontiac	205	205	200	1 1-3	6 1-2	32	27	14	3	\$14 68	5 14	\$9 82
Port Austin	51		35		1		2	11				
Reading	34		71		3	36	1	11			1 98	
Richmond			28		1	27					2 18	
Rochester	62	56	43		1	46	4	11		5 71	2 77	8 48
Rolland No. 4	41	35	24	1		35					64	
Rosecommon	55				1						1 08	
St. Clair	267	118	103	1	1 1-3	47	2			9 16	6 23	15 39
St. Louis A.	190	123	111	1	2	43	4	15		8 65	2 97	11 62
Saline	103	77	75		2	39	15	15	1		3 97	13 33
Sand Beach	105	73	73		2	39	1	14		10 77	3 70	14 47
Sangatusck	126	70	63		2	35	2				3 41	
South Haven	150				2						4 55	
Sparta	61		32		1			12			2 12	
Spring Lake	210	122	120		3	44	2	12		9 32	1 75	11 07
Springport	34	23	26		1	32	10	11				
Stanton	67	70	67		2	34	3	13	4		4 30	
Sturgis	153	125	117		3	45				9 13	2 72	11 85
Tawas City	56				1						11 11	
Three Rivers	103	90	80		2	45	2	11			1 64	
Trenton	131	144	110	1	1	72		14			1 01	
Tuscola	70		32	1			1	11	3	6 43	1 54	7 97
Tustin	51	33	32	1		30	2	16			3 02	
Unionville	53		35		1						1 36	
Vassar	174	124	113		3	44	4	15	4	8 30	7 30	16 70
Vermontville	37	27	27		1	27					2 04	
Vernon	62	52	48		1 2-3	31	1			9 61	4 22	13 83
Vicksburg	32	66	62		2	34				9 04	2 53	11 57
Vriesland	56	56	39	1		56		16			67	
Vulcan	55	41	36		1	41		11			13 72	
Watrousville	29			1							1 64	
West Bay City	633	230		2	12	29					4 49	
Williamston	106	91	90		2	47	7				11 11	
Zeeland	76	42	37	1		42		15		13 33	2 41	15 74
Zilwaukee	90	49	35		1	40					3 29	

TABLE XXIII.

Statistics of the Primary Department of One Hundred and Seventy-nine School Districts, Compiled from the Reports of Superintendents and Principals, for the School Year 1887-8.

Districts.	Enrollment in department.	Average No. belonging.	Average daily attendance.	No. of men teachers.	No. of women teachers.	Av. No. of pupils to each teacher.	No. of non-resident pupils.	Av. age of class promoted.		Cost per capita for instruction.	Cost per capita for incidentals.	Total cost per capita.
								Years.	Months.			
Adrian.....	843	527	484	1-12	15	35	-----	11	----	\$10 78	\$5 00	\$15 78
Ann Arbor.....	851	624	598	-----	18	39	81	10	----	10 60	4 67	15 27
Bad Axe.....	197	143	112	-----	3	34	2	-----	-----	4 17	3 01	7 18
Bay City.....	3,825	1,967	1,887	1	47	41	8	11	8	8 99	3 48	12 47
Bellevue.....	125	125	-----	-----	2	62	-----	-----	-----	-----	-----	-----
Bellville	67	-----	48	-----	1	-----	-----	9	6	-----	-----	-----
Berrien Springs....	65	48	44	-----	1	48	-----	8	6	6 46	1 33	8 29
Bessemer	380	212	150	-----	4	52	-----	12	-----	8 49	14 92	23 41
Big Rapids.....	975	675	598	-----	13	40	-----	-----	-----	8 02	3 05	11 07
Blissfield.....	92	60	54	-----	2	-----	-----	-----	-----	-----	72	-----
Boyne Falls.....	58	-----	36	-----	1	-----	-----	-----	-----	-----	1 09	-----
Brighton	88	70	65	-----	2	35	-----	-----	-----	-----	5 17	-----
Brockway Center..	167	94	-----	-----	2	47	-----	-----	-----	-----	2 22	-----
Brooklyn.....	126	-----	-----	-----	2	-----	-----	-----	-----	-----	4 40	-----
Byron	69	58	41	-----	1	58	-----	9	-----	4 82	1 38	6 20
Byron Center.....	54	46	31	-----	1	46	-----	-----	-----	-----	2 22	-----
Cadillac.....	777	435	394	1 2-3	8	48	2	-----	-----	11 18	12 42	23 60
Caledonia.....	67	-----	45	-----	1	-----	-----	-----	-----	-----	-----	-----
Calumet	1,822	1,301	1,138	1	24	52	-----	11	11	-----	6 52	-----
Cannonsburg.....	40	-----	30	-----	1	-----	-----	-----	-----	-----	-----	-----
Caro.....	289	177	157	1-12	4	44	8	10	----	7 76	3 58	11 34
Carsonville.....	130	-----	-----	-----	1	-----	-----	-----	-----	-----	87	-----
Casnovia.....	51	51	35	-----	1	51	-----	-----	-----	-----	2 28	-----
Cassopolis	208	160	135	-----	3	53	-----	-----	-----	-----	4 68	-----
Cedar Springs.....	206	105	98	-----	2	53	14	11	----	-----	3 36	-----
Central Mine.....	140	125	86	-----	2	63	-----	-----	-----	-----	3 30	-----
Champion	371	220	218	-----	4	55	-----	-----	-----	-----	7 86	-----
Cheboygan	322	208	194	-----	5	41	8	-----	-----	-----	2 31	-----
Clarkston.....	61	-----	-----	-----	1	-----	-----	-----	-----	-----	2 37	-----
Clayton.....	60	50	40	-----	1	50	-----	-----	-----	5 12	1 75	6 37
Clio	83	79	60	-----	1	79	8	-----	-----	-----	84	-----

TABLE XXIII.—Continued.

Districts.	Enrollment in department.	Average No. belonging.	Average daily attendance.	No. of men teachers.	No. of women teachers.	Av. No. of pupils to each teacher.	No. of non-resident pupils.	Av. age of class promoted.		Cost per capita for instruction.	Cost per capita for incidentals.	Total cost per capita
								Years.	Months.			
Coldwater	648	406	379	.....	9 1-2	45	2	.....	.....	\$7 43	\$5 48	\$12 91
Columbiaville	61	.....	.....	.....	1	.....	.....	.....	.....	.....	2 99	.....
Concord	106	83	78	.....	2	42	.....	12	.....	.....	8 10	.....
Coral	70	.....	43	.....	1	.....	1	9	.....	.....	.....	.....
Croswell	98	76	76	.....	1	76	.....	8	.....	.....	70	.....
Crystal Falls	180	78	68	.....	2	89	.....	.....	.....	11 53	7 88	18 91
Dansville	80	76	72	.....	2	38	.....	.....	.....	.....	4 63	.....
Davisburg	25	20	15	.....	1	20	.....	.....	.....	11 25	1 94	13 19
Detroit	16,722	11,969	11,159	.....	254	49	.....	.....	.....	11 26	6 70	17 96
Dexter	187	110	100	.....	3	36	.....	11	10	7 01	2 00	9 01
Douglas	44	29	23	.....	1	.....	.....	.....	.....	.....	.....	.....
East Blissfield	81	54	44	.....	1	54	.....	.....	.....	9 36	3 21	12 57
East Lake	161	101	94	.....	2	50	.....	.....	.....	6 66	40	7 06
East Tawas	132	98	88	.....	3	33	.....	.....	.....	.....	2 81	.....
Edwardsburg	60	.....	.....	.....	1	.....	.....	.....	.....	.....	4 15	.....
Elk Rapids	241	149	139	.....	4	37	.....	.....	.....	16 99	4 99	21 98
Elm Hall	68	.....	33	.....	1	.....	.....	.....	.....	.....	1 65	.....
Escanaba	395	221	171	.....	4	55	.....	10	.....	.....	2 29	.....
Essexville	149	.....	117	1	1	.....	.....	.....	.....	4 50	3 75	8 25
Fayette	80	60	58	.....	1	60	.....	9	6	4 81	1 35	6 16
Fenton	302	290	271	.....	6	48	.....	.....	.....	.....	2 08	.....
Ferrysburg	84	.....	48	.....	1	.....	.....	.....	.....	.....	.....	.....
Filer City	38	23	21	1	.....	23	.....	.....	.....	.....	13 93	.....
Flat Rock	74	60	41	.....	1	60	3	.....	.....	.....	8 08	.....
Flint	1,203	727	695	.....	19	38	4	11	.....	9 03	.....	9 03
Fowlerville	161	118	106	.....	3	39	.....	9	.....	.....	2 49	.....
Galesburg	46	41	37	.....	1	41	5	.....	.....	7 03	2 72	9 75
Gaylord	62	54	54	1	.....	54	.....	.....	.....	.....	3 50	.....
Girard	35	35	26	.....	1	35	.....	9	.....	.....	1 79	.....
Grand Ledge	90	.....	.....	.....	1	.....	.....	.....	.....	.....	2 35	.....
Grand Rapids	8,262	4,456	4,201	1 1-2	123	36	52	10	6	.....	4 62	.....
Grass Lake	107	73	64	.....	2	36	2	10	.....	8 48	1 45	9 93
Greenland No. 2	23	20	18	.....	1	20	.....	.....	.....	.....	8 95	.....
Greenville	495	311	297	.....	6	52	.....	.....	.....	8 23	3 47	11 70
Grindstone City	65	.....	35	.....	1	.....	.....	.....	.....	.....	1 03	.....
Hadley	36	36	29	.....	1	36	.....	.....	.....	.....	1 80	.....
Hancock	403	244	226	1-3	6	41	1	9	10	11 99	6 16	18 15

TABLE XXIII.—Continued.

Districts.	Enrollment in Department.	Average No. belonging.	Average daily attendance.	No. of men teachers.	No. of women teachers.	Av. No. of pupils to each teacher.	No. of non-resident pupils.	Av. age of class promoted.		Cost per capita for instruction.	Cost per capita for incidentals.	Total cost per capita.
								Years.	Months.			
Hart.....	96	82	78	.....	1 1-2	54	2	.....	.....	\$6 19	\$1 57	\$7 76
Hartford.....	172	.....	53	.....	2	.....	.....	.....	.....	.....	1 84	.....
Hastings.....	429	271	245	.....	6	45	2	10	2	7 54	2 12	9 66
Hersey.....	62	52	40	.....	1	52	.....	.....	.....	.....	1 77	.....
Hesperia.....	137	119	108	.....	1 1-2	65	1	8	.....	1 60	30	1 90
Hilledale.....	443	285	261	.....	8	35	.....	10	8	11 06	15 14	26 20
Holland.....	750	420	400	1-3	8	53	8	10	.....	6 46	2 71	9 17
Holly.....	188	150	135	.....	3	50	1	.....	.....	.....	2 73	.....
Howell.....	629	200	237	.....	6	43	.....	.....	.....	.....	5 70	.....
Hubbardston.....	49	37	34	.....	1	37	1	.....	.....	10 10	2 55	12 65
Hudson.....	142	116	109	.....	3	39	3	11	.....	9 08	3 99	13 07
Imlay City.....	229	225	.....	.....	5	45	.....	.....	.....	.....	.....	.....
Ionia.....	836	455	439	.....	12	33	16	.....	.....	.....	5 26	.....
Ispheming.....	1,173	.....	.....	.....	11	.....	.....	10	.....	.....	7 65	.....
Jackson No. 1.....	1,424	924	369	1-3	23	42	12	.....	.....	10 78	5 29	16 07
Jackson No. 17.....	1,130	599	553	.....	13	46	15	.....	.....	8 49	2 95	11 44
Jonesville.....	149	97	93	1-6	2	48	2	10	.....	9 14	5 62	14 76
Kalamazoo.....	2,522	1,508	1,404	1-3	37	41	4	11	5	8 23	3 11	11 34
Lakeside.....	267	244	212	.....	5	45	6	11	.....	.....	3 66	.....
Lakeview.....	114	103	96	.....	2	51	.....	9	.....	5 88	2 09	7 97
L'Anse.....	156	84	69	.....	3	28	.....	8	.....	18 44	4 53	13 06
Lansing.....	1,231	904	715	.....	20	40	4	10	7	.....	5 49	.....
Lapeer.....	505	370	320	.....	8	46	3	.....	.....	7 04	5 51	12 55
Lawrence.....	54	37	33	.....	1	37	.....	9	.....	6 79	7 40	14 19
Lawton.....	110	69	62	.....	1	69	5	9	.....	.....	3 57	.....
Lenawee Junction.....	55	52	36	.....	1	52	1	.....	.....	.....	1 39	.....
Lisbon.....	54	38	26	.....	1	38	5	10	.....	7 04	1 51	8 55
Litchfield.....	103	57	52	.....	1	57	.....	.....	.....	4 07	2 31	6 38
Lowell.....	271	195	175	1	3	49	.....	.....	.....	5 94	6 38	12 32
Luther.....	157	93	76	.....	2	49	.....	8	.....	.....	3 10	.....
McBride.....	57	45	36	.....	1	45	.....	8	.....	10 00	2 37	12 37
Manchester.....	214	172	164	.....	3 3-4	45	1	.....	.....	7 13	2 56	9 69
Manistee.....	1,350	673	643	1	16	40	1	10	.....	.....	2 39	.....
Manton.....	57	41	.....	.....	1	41	.....	.....	.....	.....	9 14	.....
Marine City.....	222	165	129	.....	3	54	1	.....	.....	5 32	4 51	10 33
Marlette.....	110	75	64	1	75	2 00
Marquette.....	948	748	667	1	15	50	5 66

PRIMARY SCHOOL STATISTICS.

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TABLE XXIII.—Continued.

Districts.	Enrollment in department.	Average No. belonging.	Average daily attendance.	No. of men teachers.	No. of women teachers.	Av. No. of pupils to each teacher.	No. of non-resident pupils.	Av. age of Class promoted.		Cost per capita for instruction.	Cost per capita for incidentals.	Total cost per capita.
								Years.	Months.			
Marshall.....	346	268	250	.....	8	88	1	10	2	\$10 50	\$6 66	\$17 16
Mason.....	230	.....	.....	1	4	.....	2	.....	.....	8 58	5 07	18 60
Memphis.....	59	.....	.....	.....	1	.....	.....	.....	.....	.....	2 25	.....
Michigamme.....	261	165	147	.....	2	82	.....	.....	.....	.....	4 26	.....
Midland.....	455	256	239	.....	6	43	.....	.....	.....	6 32	5 87	12 19
Milan.....	114	72	72	.....	2	36	.....	.....	.....	.....	.....	.....
Milford.....	143	113	104	.....	2 3-4	41	5	10	.....	6 24	2 98	9 17
Montague.....	425	218	197	1	4	43	1	.....	.....	.....	4 60	.....
Monroe.....	295	225	202	.....	5	45	.....	.....	.....	.....	4 12	.....
Mt. Pleasant.....	363	256	215	.....	5	51	.....	.....	.....	6 45	4 26	10 71
Mutr.....	65	42	.....	.....	1	42	.....	.....	.....	9 55	10 34	19 89
Muskegon.....	3,485	2,198	2,058	.....	52	42	5	.....	.....	10 50	4 50	15 00
Napoleon.....	59	43	.....	.....	1	43	.....	.....	.....	.....	.....	.....
Nashville.....	150	.....	.....	.....	3	.....	2	.....	.....	.....	4 75	.....
Negaunee.....	676	563	516	1	9	58	.....	11	.....	.....	9 35	.....
Newaygo.....	200	174	182	.....	8	58	.....	.....	.....	.....	1 20	.....
New Baltimore.....	48	34	34	.....	1	34	.....	9	.....	8 23	.....	8 23
New Haven.....	65	59	44	.....	1	59	.....	.....	.....	.....	1 75	.....
New Troy.....	53	40	.....	.....	1	40	.....	.....	.....	.....	.....	.....
Niles.....	588	488	394	.....	12	36	2	.....	.....	10 70	8 50	14 20
North Muskegon...	310	260	250	2	1	86	.....	8	5	4 29	2 60	6 89
Northport.....	40	.....	30	.....	1	.....	.....	.....	.....	.....	1 52	.....
Olivet.....	66	34	29	.....	1	34	7	11	.....	.....	.....	.....
Oneskama.....	75	58	45	.....	1	58	.....	.....	.....	5 48	5 00	10 43
Onondaga.....	43	43	35	.....	1	43	.....	.....	.....	8 18	8 73	6 91
Oscoda.....	437	259	220	.....	6	43	.....	10	6	8 98	10 91	19 89
Otsego.....	155	86	80	.....	2	43	1	.....	.....	.....	2 05	.....
Ovid.....	276	186	168	.....	4	46	.....	8	8	6 34	3 12	9 46
Oxford.....	164	94	.....	.....	2	47	2	9	.....	.....	8 94	.....
Palo.....	28	.....	16	.....	1	.....	.....	9	8	.....	3 48	.....
Paris.....	36	36	.....	.....	1	36	.....	.....	.....	.....	1 94	.....
Parma.....	116	114	59	.....	2	57	2	.....	.....	.....	6 84	.....
Paw Paw.....	143	112	103	.....	2 1-2	45	.....	.....	.....	.....	3 14	.....
Petersburg.....	133	117	69	.....	2	58	.....	8	.....	.....	1 94	.....
Petoskey.....	304	181	180	.....	6	30	2	10	.....	.....	2 44	.....
Pierson.....	80	80	40	.....	1	80	.....	.....	.....	.....	60	.....
Pinnebog.....	81	60	.....	.....	1	60	.....	.....	.....	2 22	.....	2 22

TABLE XXIII.—Continued.

Districts.	Enrollment in department.	Average No. belonging.	Average daily attendance.	No. of men teachers.	No. of women teachers.	Av. No. of pupils to each teacher.	No. of non-resident pupils.	Av. age of class promoted.		Cost per capita for instruction.	Cost per capita for incidentals.	Total cost per capita.
								Years.	Months.			
Pittsford.....	52	50	88	.....	1	50	.....	.....	.....	.....	\$1 49	.....
Plainwell.....	170	146	126	.....	4	38	.....	9	.....	.....	1 71	.....
Pontiac.....	640	438	424	1-3	10 1-2	39	5	12	4	\$11 05	5 14	\$16 19
Port Austin.....	90	.....	61	.....	1	.....	8	.....	.....	.....	.....	.....
Reading.....	82	78	68	.....	2	39	.....	10	.....	.....	1 98	.....
Richmond.....	120	87	76	.....	2	43	2	.....	.....	.....	2 18	.....
Rochester.....	103	78	57	.....	1	78	.....	8	.....	4 10	2 77	6 87
Rolland No. 4.....	48	44	41	.....	1	44	15	.....	.....	.....	64	.....
Roscommon.....	83	.....	.....	.....	1	.....	.....	.....	.....	.....	1 08	.....
St. Clair.....	466	323	295	.....	7	47	.....	.....	.....	6 97	6 23	13 20
St. Louis.....	492	290	247	.....	6	48	2	11	.....	7 85	2 97	10 82
Saline.....	150	111	105	.....	2	55	.....	10	6	5 92	8 97	9 89
Sand Beach.....	178	105	105	.....	2	52	.....	10	.....	7 76	8 70	11 46
Saugatuck.....	163	93	85	.....	2	46	2	.....	.....	.....	8 41	.....
South Haven.....	205	.....	.....	.....	3	.....	.....	.....	.....	.....	4 55	.....
Sparta.....	83	.....	40	.....	1	.....	.....	10	.....	.....	2 18	.....
Spring Lake.....	405	243	179	.....	4	60	2	9	6	9 32	1 20	10 52
Springport.....	52	49	47	.....	1	49	.....	.....	.....	.....	2 85	.....
Stanton.....	444	324	286	.....	7	46	.....	13	.....	.....	4 20	.....
Sturgis.....	227	204	179	.....	4	51	.....	.....	.....	8 31	2 72	11 03
Tawas City.....	171	.....	.....	.....	3	.....	.....	.....	.....	.....	3 08	.....
Three Rivers.....	308	192	160	.....	6	32	1	8	.....	.....	1 64	.....
Trenton.....	120	86	65	.....	1	86	.....	9	.....	.....	1 01	.....
Tuscola.....	64	.....	41	.....	1	.....	.....	.....	.....	2 50	1 68	4 18
Tustin.....	44	22	18	.....	1	22	.....	.....	.....	.....	3 02	.....
Unionville.....	67	59	31	.....	1	50	.....	.....	.....	.....	1 86	.....
Vassar.....	238	188	124	.....	4	35	.....	8	6	9 85	9 80	19 65
Vermontville.....	154	96	89	.....	2	49	.....	.....	.....	.....	2 04	.....
Vernon.....	88	68	30	.....	1 1-3	51	.....	.....	.....	5 44	4 22	9 66
Vicksburg.....	129	102	85	.....	2	51	.....	.....	.....	5 82	2 53	8 35
Vriesland.....	57	57	34	.....	1	57	.....	11	.....	.....	67	.....
Vulcan.....	90	55	45	.....	1	55	.....	8	.....	.....	18 72	.....
Watrousville.....	38	.....	.....	.....	1	.....	.....	.....	.....	.....	1 64	.....
West Bay City.....	2,000	1,290	1,252	.....	23	56	.....	.....	.....	.....	4 49	.....
Williamston.....	150	132	123	.....	2	66	.....	.....	.....	.....	2 85	.....
Zeeland.....	301	205	171	.....	3	68	1	12	.....	4 00	2 41	6 41
Zilwaukee.....	150	65	47	.....	2	33	.....	.....	.....	.....	3 29	.....

T A B L E X X I V .

Receipts and Expenditures at Teachers' Institutes for the Calendar Year 1888.

Counties.	Locations.	Dates.	Receipts.		Disbursements.			
			County fund.	State fund.	Compensation of instructors.	Expenses of instructors.	Other expenses.	Total.
Totals			\$9,847 77	\$1,305 83	\$7,814 86	\$2,127 97	\$1,210 26	\$11,164 09
Allegan	Plainwell	Aug. 27-31	\$150 00	.....	\$110 00	\$23 20	\$16 80	\$160 00
Alpena	Alpena	Aug. 27-31	44 00	\$90 00	62 01	33 35	9 64	104 00
Antrim	Bellaire	Sept. 8-7	81 00	34 95	80 00	21 70	14 25	115 95
Arenac	Omer	Feb. 10-14	24 50	51 25	50 00	13 25	12 50	75 75
Barry ¹	Hastings	Aug. 20-31	258 35	.....	200 00	31 40	26 95	263 35
Henzle	Frankfort	Aug. 20-24	60 56	60 00	79 20	33 00	9 30	120 50
Berrien	Buchanan	Aug. 20-24	194 00	.....	120 00	49 25	14 75	194 00
Branch ¹	Coldwater	July 23-Aug. 3	300 82	.....	220 00	39 33	41 59	300 82
Calhoun ¹	Homer	Mar. 19-27	327 74	.....	220 00	43 99	43 75	337 74
Cass	Cassopolis	Aug. 13-17	145 61	.....	90 00	30 16	25 45	145 61
Charlevoix	Boyne City	July 20-Aug. 3	79 00	45 00	90 00	21 00	13 00	124 00
Cheboygan	Cheboygan	Aug. 20-24	25 50	60 00	47 70	30 00	7 80	85 50
Chippewa	Sault Ste. Marie	Aug. 20-24	65 50	43 95	30 00	15 45	14 00	109 45
Clinton	St. Johns	Aug. 27-31	142 85	.....	90 00	31 10	21 75	143 85
Orawford	Grayling	Feb. 21-25	27 00	60 00	61 80	21 85	10 85	94 50
Roscommon			7 50					
Eaton ²	Charlotte	Aug. 6-24	338 15	.....	300 00	72 00	23 15	338 15

¹ Institute continued two weeks.
² Institute continued three weeks.

TABLE XXIV.—Continued.

Counties.	Locations.	Dates.	Receipts.		Disbursements.		
			County fund.	State fund.	Compensation of Instructors.	Expenses of Instructors.	
Emmet.....	Petokey.....	Aug. 19-17.....	945 00	900 00	903 70	943 80	\$105 00
Genesee.....	Fenton.....	Aug. 12-17.....	120 50	.....	90 00	28 55	120 50
Gladwin.....	Gladwin.....	Mar. 19-24.....	29 75	41 05	58 00	12 50	20 80
Grand Traverse.....	Traverse City.....	Aug. 27-31.....	66 50	60 00	90 00	23 50	126 50
Gratiot.....	St. Louis.....	Aug. 20-31.....	200 25	.....	205 00	44 50	200 25
Hillsdale.....	Jonesville.....	Aug. 27-31.....	124 10	.....	120 00	22 75	124 10
Houghton.....	Houghton.....	Aug. 20-24.....	120 65	.....	90 00	28 40	120 65
Huron.....	Sand Beach.....	May 28-June 1.....	141 04	.....	90 00	29 64	141 04
Ingham.....	Williamston.....	Aug. 19-17.....	308 50	.....	214 00	67 50	308 50
Ionia.....	Ionia.....	July 9-Aug. 3.....	414 25	.....	340 00	25 25	414 25
Iosco.....	Au Sable.....	Oct. 29-Nov. 2.....	52 50	50 00	90 00	12 00	112 50
Isabella.....	Mt. Pleasant.....	Aug. 27-31.....	91 00	50 00	99 00	24 15	141 00
Jackson.....	Brooklyn.....	Mar. 29-30.....	205 15	.....	129 05	57 99	205 15
Kalamazoo.....	Galesburg.....	Aug. 12-17.....	304 20	.....	240 00	41 05	304 20
Kent.....	Grandville.....	Mar. 29-30.....	171 25	.....	130 00	24 65	171 25
Kent.....	Sparta.....	July 9-20.....	295 53	.....	205 00	25 55	295 53
Lapeer.....	Lapeer.....	Aug. 20-31.....	274 55	.....	212 00	20 95	274 55
Lenawee.....	Adrian.....	Aug. 19-17.....	157 33	.....	90 00	50 98	157 33
Livingston.....	Howell.....	Aug. 27-31.....	122 15	.....	90 00	26 55	122 15
Mackinac.....	St. Ignace.....	Aug. 27-31.....	24 00	90 00	71 25	11 25	94 00
Macomb.....	Armada.....	Mar. 23-Apr. 1.....	100 50	28 50	90 00	25 50	124 00
Manistee.....	Manistee.....	Sept. 10-14.....	77 50	60 00	35 00	23 50	127 00

RECEIPTS AND EXPENDITURES AT INSTITUTES.

Marquette.....	Aug. 27-31.....	61 00	60 00	90 00	20 00	11 00	121 00
Ludington.....	Oct. 29-Nov. 2.....	89 50	41 94	90 00	31 00	10 44	131 44
Big Rapids.....	Aug. 27-31.....	100 00	40 00	90 00	28 00	28 00	140 00
Mecosta.....	Aug. 13-17.....	54 00	60 00	88 88	10 68	14 44	114 00
Midland.....	Aug. 13-17.....	47 00	43 05	55 00	23 55	11 50	90 05
Missaukee.....	Oct. 15-19.....	153 35	.....	90 00	51 00	12 35	153 35
Monroe.....	Aug. 13-17.....	272 85	.....	208 00	44 85	20 50	272 85
Montcalm ¹	Aug. 20-31.....	98 50	40 00	83 83	41 48	14 10	133 50
Muskegon.....	Aug. 6-10.....	115 50	.....	90 00	11 50	14 00	115 52
Newaygo.....	Oct. 22-26.....	323 00	.....	230 00	53 90	38 10	322 00
Oakland ¹	Aug. 20-31.....	164 50	28 40	90 00	20 30	22 80	132 90
Oceana.....	Aug. 27-31.....	67 00	58 23	90 00	17 73	12 50	120 23
Otsego.....	Aug. 27-31.....	49 00	44 00	53 00	29 00	11 00	93 00
Ottawa.....	Aug. 20-24.....	169 85	.....	130 00	23 85	15 50	169 35
Saginaw.....	Aug. 27-31.....	215 31	.....	130 00	62 51	22 80	215 31
St. Clair ²	July 16-Aug. 3.....	316 30	.....	251 00	40 40	24 90	316 30
St. Joseph ¹	Aug. 20-31.....	323 77	.....	230 00	66 87	29 90	323 77
Sanilac.....	Mar. 19-23.....	143 00	.....	90 00	35 70	17 30	143 00
Shlawassee.....	Aug. 20-24.....	180 16	.....	120 00	45 86	14 30	180 16
Tuscola ¹	Aug. 20-31.....	314 95	.....	215 00	73 95	27 00	* 315 95
Van Buren.....	Aug. 20-27.....	153 50	.....	108 00	33 10	12 40	153 50
Washtenaw.....	Aug. 13-17.....	203 25	.....	130 00	49 50	23 85	203 25
Wayne.....	Aug. 13-17.....	223 40	.....	130 00	66 00	33 40	223 40
Wexford.....	Mar. 23-30.....	75 30	55 00	90 00	27 30	13 00	130 30

¹ Institute continued two weeks.
² Institute continued three weeks.
³ Institute continued four weeks.
* Through an error the disbursements at this institute exceeded the receipts from the institute fund \$1, which amount was paid by the conductor from his private funds.

TABLE XXV.

Local Committees, Conductors and Instructors at Teachers' Institutes for the Calendar Year 1888.

Counties.	Local Committees.	Conductors.	Assistant Instructors.
Allegan	L. E. Irland.....	J. W. Simmons.....	L. E. Irland, Mrs. A. E. Sterling.
Antrim.....	Roswell Leavitt.....	J. M. Pile.....	O. S. Gulle.
Alpena.....	E. L. Little.....	S. B. Laird.....	C. L. Bemis.
Arenac	J. H. Belknap.....	H. R. Pattengill....	
Barry.....	J. W. Roberts	J. G. Plowman	O. B. Hall, D. C. Warner.
Benzie	Mrs. Rose Woodward.	J. B. Estabrook.....	C. M. McLean.
Berrien	O. E. Aleshire.....	F. A. Barbour.....	W. H. Cheever, O. E. Aleshire.
Branch.....	B. S. Spofford.....	E. A. Strong.....	P. M. Parker.
Calhoun	Miss Lizzie M. Cook..	H. King.....	Miss M. H. Ross, R. A. Culver.
Cass.....	L. L. Coates.....	J. G. Plowman.....	J. B. Estabrook.
Charlevoix....	R. L. Corbett.....	H. M. Enos	F. O. Wickham.
Cheboygan ...	G. C. Moore.....	E. A. Wilson.....	F. O. Wickham.
Chippewa... ..	S. P. Tracy.....	C. F. R. Bellows....	A. Jay Murray.
Clinton.....	W. H. Brunson.....	J. M. Pile.....	Miss Maude E. Cannell.
Crawford....	Miss Julia Erb	Henry A. Ford.....	Mrs. Kate B. Ford.
Roscommon }			
Eaton.....	Geo. E. Adams.....	H. King.....	Orr Schurtz, Chas. McKinney.
Emmet.....	C. S. Hampton.....	Daniel Putnam.....	Miss Emma Seibley.
Genesee.....	H. Z. Brock.....	Ferris S. Fitch	E. C. Thompson.
Gladwin	C. C. Fouch.....	H. R. Gass.....	F. C. Smith.
G'd Traverse.	C. J. Kneeland	C. T. Grawn.....	C. M. McLean.
Gratiot.....	N. A. Richards.....	J. N. McCall.....	Miss Nina Vanderwalker. J. W. Ewing.
Hillsdale.....	W. L. Shuart.....	E. A. Strong.....	W. C. Ginn, W. A. Drake.
Houghton....	Miss Ella Ludwig....	F. W. Arbury	F. D. Davis.
Huron.....	C. W. McCurdy.....	H. C. Rankin.....	J. M. Pile.
Ingham	T. L. Evans.....	W. S. Perry.....	E. L. Briggs, A. R. Hardy, Miss Maude Cannell, Miss Emma Seibley.
Ionia	A. L. Silvernail.....	J. W. Simmons.....	C. L. Bemis, W. D. Clisbe.
Iosco.....	A. C. LeDuc.....	C. L. Bemis.....	C. K. Perrine.
Isabella.....	Fred Russell.....	E. L. Briggs	W. H. Cheever.
Jackson.....	E. N. Palmer.....	David Howell.....	D. E. Haskins.
Kalamazoo ...	Miss Julia Qua.....	I. N. Demmon.....	Delos Fall, W. C. Hewitt.
Kent ¹	A. H. Smith.....	Jas. Chalmers.....	C. R. Dockeray, E. A. Carpenter.
Kent ²	Jas. Chalmers.....	Jas. Chalmers.....	E. A. Carpenter, A. H. Smith.

TABLE XXV.—Continued.

Counties.	Local Committees.	Conductors.	Assistant Instructors.
Lapeer	C. E. Palmerlee.....	A. E. Haynes.	H. O. Rankin, Miss Maude Cannell.
Lenawee.....	E. G. Walker.....	H. R. Pattengill.....	R. W. Putnam.
Livingston.....	S. D. Williams.....	F. A. Barbour.....	P. A. Latta.
Mackinac.....	C. E. Taggart.....	H. M. Enos.....	J. R. Cochran.
Macomb	R. J. Crawford.....	A. E. Haynes.....	H. O. Rankin.
Manistee.....	Albert Jennings.....	H. R. Gass.....	Mrs. C. J. Sterling.
Marquette.....	J. B. Montgomery.....	C. F. R. Bellows.....	Chas. Kelsey.
Mason.....	L. H. McCollum.....	W. A. Drake.....	A. F. Webster.
Mecosta	P. M. Brown.....	S. W. Baker.....	Mrs. Kate B. Ford.
Midland	T. W. Crissey.....	E. P. Church.....	T. W. Crissey.
Missaukee	Will J. Roach.....	H. R. Gass.....	E. Wood.
Monroe.....	J. A. Stewart.....	John Goodison.....	F. M. Harlow.
Montcalm.....	E. P. Church.....	E. P. Church.....	Miss M. H. Ross, E. C. Thompson.
Muskegon.....	C. M. McLean.....	Austin George.....	Mrs. Kate B. Ford.
Newaygo.....	Tyson Smith.....	S. T. Morris.....	H. W. Brayton.
Oakland	Ferris S. Fitch.....	Austin George.....	Ferris S. Fitch, J. Montgomery.
Oceana	Stewart Mackibbin...	Stuart Mackibbin...	C. T. Grawn.
Oscoda	B. E. Scott.....	W. N. Ferris.....	John O. Reed.
Otsego.....	J. M. Sanborn.....	E. M. Russell.....	J. M. Sanborn.
Uttawa.....	G. P. Hummer.....	J. W. Humphrey....	P. A. Latta, A. W. Taylor.
Saginaw	E. C. Thompson.....	H. King	E. O. Thompson, A. J. Swain.
St. Clair.....	Fred Garbut	G. A. Parker.....	{ O. D. Thompson, Miss Nina C. Van- derwalker.
St. Joseph.....	Sheridan Osbon.....	G. J. Edgecumbe....	S. G. Burkhead, G. A. Osinga.
Sanilac.....	J. K. Osgerby.....	B. A. Hinedale.....	I. N. Demmon.
Shiawassee.....	A. J. Swain.....	S. W. Baker.....	H. R. Gass, Mrs. L. E. Gould.
Tuscola.....	C. Q. Tappan.....	R. W. Putnam.....	{ John Goodison, Ira L. Forbes, Miss Carrie Bassett.
Van Buren...	E. M. Russell.....	H. R. Pattengill.....	W. W. Chalmers, E. M. Russell.
Washtenaw...	E. O. Warner.....	Austin George	Miss Julia A. King, J. W. Humphrey.
Wayne.....	M. O. Graves.....	F. A. Barbour.....	J. W. Ewing, W. C. Ginn.
Wexford.....	O. M. McLaughlin....	H. R. Gass.....	W. N. Ferris.

TABLE XXVI.

Enrollment at Teachers' Institutes for the Calendar year 1888.

Counties.	No. of teachers re- supply	Number enrolled.			Kind and grades of certificates held by members.						No. without experi- ence in teaching.	No. having received normal instruction.	Average attendance each half day.
					State.	Normal.	First.	Second.	Third.	Special.			
Totals.....	9				25	126	226	424	8,944	69	1,512	624	63.5
Allegan.....	231	27	74	101	1	8	5	21	44	.....	23	10	56.7
Alpena.....	67	4	43	46	.....	.....	5	2	26	.....	12	.....	34.
Antrim.....	81	15	21	49	.....	.....	2	1	32	1	12	9	34.2
Arenac.....	30	16	22	48	.....	1	2	4	23	1	16	5	36.
Barry.....	171	18	66	86	.....	2	5	9	67	.....	11	14	*
Benzie.....	51	12	60	63	1	1	5	9	29	.....	26	10	52.
Berrien.....	224	26	26	122	.....	1	7	7	91	.....	22	16	72.
Branch.....	173	41	114	155	.....	2	10	27	91	1	22	14	67.
Calhoun.....	266	56	106	222	.....	2	10	17	112	.....	.....	17	119.5
Cass.....	127	25	47	72	1	6	2	2	50	1	12	12	51.
Charlevoix.....	78	12	50	60	.....	1	4	2	41	1	14	6	29.2
Cheboygan.....	63	11	36	47	.....	.....	6	2	20	.....	11	5	27.
Chippewa.....	47	2	29	37	.....	1	1	2	22	2	7	6	21.
Clinton.....	163	22	91	112	.....	.....	1	12	22	.....	22	5	29.2
Crawford.....	42	9	22	42	.....	.....	1	6	29	2	6	5	24.4
Roscommon.....	19		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Eaton.....	196	56	155	211	.....	2	6	12	122	4	61	7	112.25
Emmet.....	75	11	25	56	.....	1	1	2	40	2	10	2	24.
Genesee.....	237	20	68	87	2	1	1	9	54	.....	19	7	56.
Gladwin.....	22	9	24	23	.....	.....	2	.....	17	.....	14	2	20.5
Grand Traverse.....	24	12	20	22	.....	2	2	1	42	.....	9	2	41.2
Gratiot.....	163	22	62	121	.....	.....	2	5	20	5	22	9	21.9
Hilledale.....	209	21	122	154	.....	2	2	5	102	2	26	12	27.6
Houghton.....	102	21	69	79	.....	2	5	2	49	.....	29	14	22.2
Huron.....	127	42	65	102	.....	2	2	16	56	2	22	6	102.
Ingham.....	200	45	104	149	1	5	1	9	92	.....	41	14	27.
Ionia.....	197	20	122	142	.....	.....	.....	5	107	1	22	6	114.2
Iosco.....	47	5	51	56	.....	2	7	4	24	.....	2	12	52.
Isabella.....	112	20	72	102	.....	2	7	6	69	.....	22	2	22.
Jackson.....	241	55	149	204	.....	.....	9	2	120	.....	22	22	*

* Average attendance not reported by conductor.

TABLE XXVI.—Continued.

Counties.	No. of teachers re-quired to supply the schools.	Number enrolled.			Kinds and grades of certificates held by members.						No. without experi-ence in teaching.	No. having received normal instruction.	Average attendance each half day.
		Men.	Women.	Total.	State.	Normal.	First.	Second.	Third.	Special.			
Kalamazoo	221	23	55	77	2	1	2	9	42	.....	26	5	33.6
Kent	465	68	198	266	.....	4	8	18	135	.....	103	17	202.
		8	36	94	.....	.....	.....	8	73	1	25	4	90.
Lapeer	183	52	92	144	2	7	7	12	88	7	21	14	85.
Lenawee	233	27	124	151	.....	.....	2	8	114	1	34	4	105.
Livingston	156	41	111	152	.....	2	.....	5	111	9	27	16	110.
Mackinac	42	5	18	23	.....	.....	.....	3	15	.....	6	2	12.1
Macomb	146	45	64	109	2	3	4	5	66	.....	29	8	84.
Manistee	95	8	63	71	.....	6	1	.....	64	.....	12	9	69.
Marquette	101	9	55	64	2	4	1	5	43	.....	12	11	51.2
Mason	86	25	95	120	1	3	1	2	49	2	35	8	112.6
Mecosta	126	17	75	92	.....	.....	.....	4	69	8	11	.....	*
Midland	67	7	37	44	.....	1	3	1	27	1	11	3	31.9
Missaukee	42	6	27	33	.....	.....	1	3	19	1	10	3	31.
Monroe	160	35	103	141	1	1	.....	11	81	.....	45	20	89.6
Montcalm	184	14	95	109	.....	3	3	4	77	2	23	6	69.7
Muskegon	203	15	66	81	.....	1	4	14	43	1	20	8	57.
Newaygo	113	14	75	89	.....	.....	2	6	67	.....	7	12	73.7
Oakland	270	22	104	126	.....	.....	1	4	94	3	33	11	66.
*Oceana	99	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Oceola	116	17	61	78	.....	2	5	7	43	.....	11	9	47.
Otsego	41	13	37	50	.....	1	4	2	32	.....	15	6	38.
Ottawa	134	33	95	128	1	1	2	13	94	.....	12	10	112.6
Saginaw	313	32	136	168	.....	.....	9	3	103	2	49	.....	122.5
St. Clair	215	12	117	129	.....	.....	.....	13	63	.....	33	59	93.
St. Joseph	176	36	93	129	1	3	3	9	80	1	35	10	54.4
Sanilac	153	50	81	131	.....	.....	3	21	50	2	55	11	101.7
Shiawassee	23	34	32	116	.....	.....	3	3	79	.....	31	9	74.7
Tuscola	177	29	78	107	.....	2	4	13	67	.....	23	9	63.
Van Buren	201	43	90	133	5	3	4	9	85	1	34	13	87.1
Washtenaw	263	33	109	142	1	24	5	2	92	1	19	53	82.
Wayne	603	24	56	80	.....	1	20	.....	47	.....	12	17	37.8
Wexford	84	25	46	71	.....	.....	2	1	47	.....	21	7	60.

* Average attendance not reported by conductor.
† No report received.

TABLE XXVII.

List of County School Examiners for 1888-9.

Counties.	Names.	Postoffices.	Occupations.	Terms Expire.
Alcona.....	{ L. Frederick, Chairman.....	Harrisville.....	Teacher.....	1889
	{ J. E. Fair, Secretary.....	Harrisville.....	Register of Deeds.....	1889
	{ David O. Darling.....	Harrisville.....	Merchant.....	1890
Alger.....	{ Mrs. Chas. Johnston, Chairman.....	Rock River.....	Housekeeper.....	1889
	{ Mrs. Mary E. Oliver, Secretary..	Rock River.....	Teacher.....	1889
	.....	.....	.....	1890
Allegan.....	{ J. F. Taylor, Chairman.....	Douglas.....	Clergyman.....	1889
	{ P. A. Latta, Secretary.....	Allegan.....	Attorney.....	1889
	{ J. W. Humphrey.....	Wayland.....	Teacher.....	1890
Alpena.....	{ F. S. Dewey, Chairman.....	Alpena.....	Merchant.....	1889
	{ E. L. Little, Secretary.....	Alpena.....	Clergyman.....	1889
	{ Jas. A. Case.....	Alpena.....	Farmer.....	1890
Antrim.....	{ F. M. Severance, Chairman.....	East Jordan.....	Farmer.....	1889
	{ Chas. S. Guile, Secretary.....	Bellaire.....	Attorney.....	1889
	{ Walter M. Andrus.....	Elk Rapids.....	Teacher.....	1890
Arenac.....	{ A. L. Wilkins, Chairman.....	Sterling.....	Teacher.....	1889
	{ U. C. Gregg, Secretary.....	Au Gres.....	Teacher.....	1889
	{ Marian F. Parker.....	Deep River.....	Teacher.....	1890
Baraga.....	{ C. S. Hebard, Chairman.....	Pequaming.....	Lumberman.....	1889
	{ Wm. L. Mason, Secretary.....	L'Anse.....	Attorney.....	1889

Barry.....	{ W. A. Morse, Chairman.....	Middleville.....	Teacher.....	1889
	{ John W. Mathews, Secretary.....	Hastings.....	Student.....	1889
	{ J. W. Roberts.....	Hastings.....	Teacher.....	1890
Bay.....	{ J. W. Smith, Chairman.....	Bay City.....	Teacher.....	1889
	{ John E. Kinnane, Secretary.....	Bay City.....	Student.....	1889
	{ T. S. Joslin.....	Pinconning.....	Engineer.....	1890
Benzie.....	{ T. B. Pettit, Chairman.....	Benzonia.....	Teacher.....	1889
	{ Mrs. Rose Woodward, Secretary..	Frankfort.....	Housekeeper.....	1889
	{ D. F. Holden.....	Oviatt.....	Farmer.....	1890
Berrien.....	{ H. C. Crosby, Chairman.....	New Buffalo.....	Teacher.....	1889
	{ C. B. Groat, Secretary.....	Niles.....	Teacher.....	1889
	{ J. C. Lawrence.....	Benton Harbor..	Farmer.....	1890
Branch.....	{ C. P. Johnston, Chairman.....	Coldwater.....	Attorney.....	1889
	{ B. S. Spoffard, Secretary.....	Coldwater.....	Teacher.....	1889
	{ W. H. Lockerby.....	Quincy.....	Attorney.....	1890
Calhoun.....	{ S. G. Gorsline, Chairman.....	Battle Creek.....	Farmer.....	1889
	{ R. A. Culver, Secretary.....	Homer.....	Teacher.....	1889
	{ Miss Lizzie M. Cook.....	Homer.....	Teacher.....	1890
Cass.....	{ M. Pemberton, Chairman.....	Vandalla.....	Teacher.....	1889
	{ D. B. Ferria, Secretary.....	Cassopolis.....	.....	1889
	{ W. W. Chalmers.....	Cassopolis.....	Teacher.....	1890
Charlevoix.....	{ R. L. Corbett, Chairman.....	Boyne City.....	Attorney.....	1889
	{ John Redpath, Secretary.....	Boyne Falls.....	Clergyman.....	1889
	{ Wm. Harris.....	Norwood.....	Farmer.....	1890
Cheboygan.....	{ G. S. Moore, Chairman.....	Cheboygan.....	Teacher.....	1889
	{ W. C. Thompson, Secretary.....	Cheboygan.....	Teacher.....	1889
	{ D. J. Galbraith.....	Cheboygan.....	Teacher.....	1890
Chippewa.....	{ A. Jay Murray, Chairman.....	Sault Ste. Marie..	Teacher.....	1889
	{ S. P. Tracy, Secretary.....	Sault Ste. Marie..	Physician.....	1889
	{ Rodney Graham.....	Rosedale.....	Teacher.....	1890
Clare.....	{ A. J. Doherty, Chairman.....	Clare.....	Merchant.....	1889
	{ Geo. Cummins, Secretary.....	Harrison.....	Attorney.....	1889
	{ T. W. Averill.....	Harrison.....	Co. Treasurer.....	1890

COUNTY SCHOOL EXAMINERS.

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TABLE XXVII.—Continued.

Counties.	Names.	Postoffices.	Occupations.	Terms Expire.
Clinton.....	{ C. E. Hollister, Chairman.....	Laingsburg.....	Surveyor.....	1889
	{ R. M. Winston, Secretary.....	St. Johns.....	Teacher.....	1889
	{ J. B. Stone.....	Riley.....	Teacher.....	1890
Crawford.....	{ Wm. Woodworth, Chairman.....	Grayling.....	Physician.....	1889
	{ Chas. E. Hicks, Secretary.....	Frederic.....	Teacher.....	1889
	{ E. G. Payne.....	Roscommon.....	Teacher.....	1890
Delta.....	{ Kirk Spoor, Chairman.....	Escanaba.....	Teacher.....	1889
	{ John Power, Secretary.....	Escanaba.....	Attorney.....	1889
	{ M. J. Sullivan.....	Garden.....	Merchant.....	1890
Eaton.....	{ Chas. McKinney, Chairman.....	Olivet.....	Teacher.....	1889
	{ Orr Schurtz, Secretary.....	Charlotte.....	Teacher.....	1889
	{ J. L. Wagner.....	Grand Ledge.....	Teacher.....	1890
Emmet.....	{ M. C. Crandall, Chairman.....	Levering.....	Teacher.....	1889
	{ Chas. S. Hampton, Secretary.....	Petoskey.....	Journalist.....	1889
	{ M. J. Erwin.....	Harbor Springs.....	Druggist.....	1890
Genesee.....	{ A. E. Ransom, Chairman.....	Flushing.....	Journalist.....	1889
	{ E. D. Black, Secretary.....	Flint.....	Attorney.....	1889
	{ G. F. Brown.....	Flint.....	Attorney.....	1890
Gladwin.....	{ M. T. Mathews, Chairman.....	Gladwin.....	Clerk.....	1889
	{ Isaac Foster, Secretary.....	Gladwin.....	Journalist.....	1889
	{ F. C. Smith.....	Gladwin.....	Teacher.....	1890
Gogebic.....	{ L. L. Wright.....	Ironwood.....	Teacher.....	1889
	{ J. S. Monroe, Secretary.....	Ironwood.....	Attorney.....	1889
	{ Thos. Waters.....	Bessemer.....	Miner.....	1890
Gd. Traverse.....	{ D. S. Nickerson, Chairman.....	Kingsley.....	Farmer.....	1889
	{ Lorin Roberts, Secretary.....	Traverse City.....	Attorney.....	1889
	{ O. J. Kneeland.....	Traverse City.....	Physician.....	1890
Gratiot.....	{ O. G. Tuttle, Chairman.....	Elm Hall.....	Teacher.....	1889
	{ G. T. Brown, Secretary.....	Ithaca.....	Attorney.....	1889
	{ T. J. Hoxie.....	Pompeii.....	Farmer.....	1890
Hillsdale.....	{ O. R. Coryell, Chairman.....	Jonesville.....	Farmer.....	1889
	{ W. A. Drake, Secretary.....	Hillsdale.....	Teacher.....	1889
	{ E. J. Townsend.....	Litchfield.....	Teacher.....	1890
Houghton.....	{ E. T. Curtis, Chairman.....	Calumet.....	Teacher.....	1889
	{ J. H. Wilson, Secretary.....	Lake Linden.....	Journalist.....	1889
	{ C. G. White.....	Lake Linden.....	Teacher.....	1890
Huron.....	{ A. J. Lynd, Chairman.....	Bad Axe.....	Teacher.....	1889
	{ M. Meddaugh, Secretary.....	Sebewaing.....	Teacher.....	1889
	{ D. E. Spencer.....	Grindstone City.....	Teacher.....	1890
Ingham.....	{ Chas. G. Jenkins, Chairman.....	Mason.....	Teacher.....	1889
	{ J. S. Huston, Secretary.....	Williamston.....	Teacher.....	1889
	{ T. A. Stephens.....	Stockbridge.....	Teacher.....	1890
Ionia.....	{ W. D. Clizbe, Chairman.....	Ionia.....	Teacher.....	1889
	{ C. L. Bemis, Secretary.....	Ionia.....	Teacher.....	1889
	{ E. A. Murphy.....	Lyons.....	Teacher.....	1890
Iosco.....	{ C. R. Henry, Chairman.....	Au Sable.....	Attorney.....	1889
	{ S. B. Laird, Secretary.....	East Tawas.....	Teacher.....	1889
Iron.....	{ S. D. Hollister, Chairman.....	Crystal Falls.....	Supt. of mines.....	1889
	{ Geo. L. Woodworth, Secretary.....	Crystal Falls.....	Surveyor.....	1889
	{ W. F. Carpenter.....	Stambaugh.....	Physician.....	1890
Isabella.....	{ James McEntee, Chairman.....	Mt. Pleasant.....	Physician.....	1889
	{ T. Knox Jeffreys, Secretary.....	Mt. Pleasant.....	Teacher.....	1889
	{ S. J. Jameson.....	Loomis.....	Teacher.....	1890
Jackson.....	{ E. N. Palmer, Chairman.....	Brooklyn.....	Physician.....	1889
	{ D. E. Haskins, Secretary.....	Concord.....	Teacher.....	1889
	{ F. M. Harlow.....	Springport.....	Teacher.....	1890
Kalamazoo.....	{ L. H. Stuart, Chairman.....	Kalamazoo.....	Teacher.....	1889
	{ Ashley Clapp, Secretary.....	Vicksburg.....	Teacher.....	1889
	{ D. H. Reiter.....	Vicksburg.....	Clergyman.....	1890

SUPERINTENDENT'S REPORT.

TABLE XXVII.—Continued.

Counties.	Names.	Postoffice.	Occupation.	Terms expire.
Kalkaska	{ G. R. Catton, Chairman.....	Kalkaska	Teacher.....	1889
	{ O. O. Jencks, Secretary.....	Kalkaska	Attorney.....	1889
	{ W. F. Hubbard.....	Leetaville	Farmer.....	1890
Kent	{ C. R. Dockeray, Chairman.....	Rockford	Teacher.....	1889
	{ E. A. Carpenter, Secretary.....	Caledonia.....	Teacher.....	1889
	{ A. H. Smith.....	Grandville.....	Teacher.....	1890
Keweenaw	{ Wm. C. Bottomley, Chairman.....	Phoenix Mine.....	Teacher.....	1889
	{ Lester S. Overholt, Secretary	Eagle Harbor.....	Teacher.....	1889
	{ L. H. Darling.....	Eagle River.....	Teacher.....	1890
Lake.....	{ D. A. Cornell, Chairman.....	Reed City.....	Farmer.....	1889
	{ F. J. West, Secretary.....	Chase.....	Farmer.....	1889
	{ Evan Essery.....	Luther.....	Teacher.....	1890
Lapeer	{ G. H. Broesamle, Chairman.....	Imlay City	Teacher.....	1889
	{ O. E. Palmerlee, Secretary.....	Lapeer	Teacher.....	1889
	{ Edwin Debar.....	Almont	Teacher.....	1890
Leelanaw.....	{ W. H. Crowell, Chairman.....	Maple City.....	Farmer.....	1889
	{ A. E. Denamore, Secretary	Maple City.....	Teacher.....	1889
	{ Henry McManus	Sutton's Bay.....	Teacher.....	1890
Lenawee.....	{ W. E. Tripp, Chairman.....	Weston.....	Teacher.....	1889
	{ E. G. Walker, Secretary.....	Adrian.....	Teacher.....	1889
	{ H. C. Daniels	Onsted.....	Teacher.....	1890
Livingston.....	{ Milo Abbott, Chairman.....	Plainfield.....	Farmer.....	1889
	{ H. E. Reed, Secretary.....	Howell.....	Farmer.....	1889
	{ Stephen Durfee.....	Fowlerville.....	Teacher.....	1890
Luce	{ Frederick Root, Chairman	McMillan	Farmer.....	1889
	{ O. A. Dean, Secretary.....	Newberry.....	Teacher.....	1889
	{ Ambro Bettes.....	Newberry.....	County Clerk.....	1890
Mackinac.....	{ J. R. Bailey, Chairman.....	St. Ignace.....	Physician.....	1889
	{ Jas. McNamara, Secretary.....	St. Ignace.....	Attorney.....	1889
	{ Louis Pauly.....	St. Ignace.....	Druggist.....	1890
Macomb	{ A. M. Keeler, Chairman.....	Richmond.....	Teacher.....	1889
	{ S. B. Russell, Secretary.....	Mt. Clemens.....	Journalist	1889
	{ David Hammell.....	New Baltimore..	Physician.....	1890
Manistee	{ Chas. McDiarmid, Chairman.....	Bear Lake.....	Farmer.....	1889
	{ Miss Jean McDiarmid, Secretary	Bear Lake.....	Teacher.....	1889
	{ Geo. H. Kilborn.....	Bear Lake.....	Farmer.....	1890
Manitou	{ John Duplevy, Chairman.....	St. James.....	Shoemaker.....	1889
	{ Owen O'Donnell, Secretary.....	St. James.....	Grocer.....	1889
	{ Wm. J. Gallagher.....	St. James.....	Fisherman.....	1890
Marquette	{ Harlow Olcott, Chairman	Ishpeming	Teacher.....	1889
	{ John Northmore, Secretary.....	Republic.....	Teacher.....	1889
	{ F. D. Davis.....	Negaunee.....	Teacher.....	1890
Mason.....	{ John Griffin, Chairman.....	East Riverton..	Farmer.....	1889
	{ Orin A. Eaton, Secretary.....	Scottville.....	Physician.....	1889
	{ L. W. Rose.....	Ludington.....	Farmer.....	1890
Mecosta.....	{ S. W. Baker, Chairman.....	Big Rapids.....	Teacher.....	1889
	{ P. M. Brown, Secretary.....	Big Rapids.....	Farmer.....	1889
	{ E. E. Wilson.....	Stanwood.....	Druggist.....	1890
Menominee	{ I. N. Collins, Chairman.....	Quinnesec	Teacher.....	1889
	{ J. W. Bird, Secretary.....	Menominee.....	Merchant.....	1889
	{ A. W. Bill.....	Menominee.....	Clergyman.....	1890
Midland	{ Chas. L. Jenney, Chairman.....	Midland	Surveyor.....	1889
	{ W. W. Allen, Secretary.....	Midland	Teacher.....	1889
	{ F. A. Towley.....	Midland	Physician.....	1890
Missaukee.....	{ J. B. Sleezer, Chairman.....	Vogel Center....	Lumberman	1889
	{ Duncan McBain, Jr., Secretary	Owens.....	Farmer.....	1889
	{ Wm. Bartholomew.....	Pioneer.....	Farmer.....	1890
Monroe	{ T. E. Allen, Chairman.....	Carleton.....	Teacher.....	1889
	{ J. K. Rogers, Secretary.....	Temperance.....	Teacher.....	1889
	{ J. W. Billmire.....	Monroe	County Clerk.....	1890
Montcalm.....	{ A. B. Brown, Chairman.....	Sheridan.....	Farmer.....	1889
	{ S. F. Kennedy, Secretary.....	Lakeview.....	Attorney.....	1889
	{ E. J. Quackenbush	McBrides.....	Teacher.....	1890
Montmorency.....	{ T. Babcock, Chairman.....	Godfrey.....	Teacher.....	1889
	{ Wm. Briley, Secretary.....	Hetherton.....	Teacher.....	1889
	{ Jas. Francis.....	Hillman	Teacher.....	1890
Muskegon.....	{ N. L. Downie, Chairman.....	North Muskegon	Teacher.....	1889
	{ H. A. Lewis, Secretary.....	Ravenna.....	Teacher.....	1889
	{ C. M. McLean	Whitehall	Teacher.....	1890

COUNTY SCHOOL EXAMINERS.

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TABLE XXVII.—Continued.

Counties.	Names.	Postoffice.	Occupation.	Terms expire.
Newaygo.....	{ S. T. Morris, Chairman.....	Newaygo.....	Teacher.....	1889
	{ Will S. Millard, Secretary.....	Hesperia.....	Teacher.....	1889
	{ John Harwood.....	White Cloud.....	Attorney.....	1890
Oakland.....	{ Fred Wieland, Chairman.....	Pontiac.....	County Clerk.....	1889
	{ C. W. Soulby, Secretary.....	Milford.....	Teacher.....	1889
	{ E. R. Webster.....	Pontiac.....	Attorney.....	1890
Oceana.....	{ G. C. Myers, Chairman.....	Hesperia.....	Farmer.....	1889
	{ C. N. Sowers, Secretary.....	Hart.....	Teacher.....	1889
	{ F. E. Young.....	Hart.....	Teacher.....	1890
Ogemaw.....	{ F. L. Snodgrass, Chairman.....	West Branch.....	Attorney.....	1889
	{ A. E. Sharpe, Secretary.....	West Branch.....	Journalist.....	1889
	{ A. L. Cumming.....	Churchill.....	Teacher.....	1890
Ontonagon.....	{ G. A. Dennison, Chairman.....	Greenland.....	Teacher.....	1889
	{ N. W. Haire, Secretary.....	Ontonagon.....	Attorney.....	1889
	{ W. W. Osband.....	Ontonagon.....	Teacher.....	1890
Osceola.....	{ B. E. Scott, Chairman.....	Hersey.....	Teacher.....	1889
	{ R. C. Hepburn, Secretary.....	Evart.....	Physician.....	1889
	{ A. B. Perrin.....	Reed City.....	Teacher.....	1890
Oscoda.....	{ John J. McCarthy, Chairman.....	Mio.....	Attorney.....	1889
	{ DeWayne Blakely, Secretary.....	Luzerne.....	Teacher.....	1889
	{ S. H. Hagaman.....	Luzerne.....	Farmer.....	1890
Otsego.....	{ Henry Whitely, Chairman.....	Gaylord.....	County Clerk.....	1889
	{ Miss F. M. Towle, Secretary.....	Gaylord.....	Teacher.....	1889
	{ Wm. H. Kettle.....	Gaylord.....	Teacher.....	1890
Ottawa.....	{ Mrs. A. V. Weatherwax, Chairman.....	Jenisonville.....	Housekeeper.....	1889
	{ A. W. Taylor, Secretary.....	Nunica.....	Teacher.....	1889
	{ Milan Coburn.....	Zeeland.....	Teacher.....	1890
Presque Isle.....	{ G. Covey, Chairman.....	Rogers City.....	Attorney.....	1889
	{ E. Erskine, Jr., Secretary.....	Rogers City.....	Teacher.....	1889
	{ August Grossmann.....	Rogers City.....	Farmer.....	1890
Roscommon.....	{ Jas. Watson, Chairman.....	Roscommon.....	Farmer.....	1889
	{ H. H. Woodruff, Secretary.....	Roscommon.....	Attorney.....	1889
	{ Wm. Rawlins.....	Roscommon.....	Farmer.....	1890
Saginaw.....	{ J. A. F. Streiter, Chairman.....	Frankenmuth.....	Teacher.....	1889
	{ W. B. Cubbage, Secretary.....	Freeland.....	Physician.....	1889
	{ Myron T. Dodge.....	Chesaning.....	Teacher.....	1890
St. Clair.....	{ E. F. Law, Chairman.....	Brockway Center.....	Teacher.....	1889
	{ Harvey Tappan.....	Port Huron.....	Attorney.....	1889
	{ Miss Bina West.....	Capac.....	Teacher.....	1890
St. Joseph.....	{ E. A. Holsington, Chairman.....	Three Rivers.....	Teacher.....	1889
	{ Sheridan Osbon, Secretary.....	Sturgis.....	Teacher.....	1889
	{ John Evert.....	Mendon.....	Teacher.....	1890
Sanilac.....	{ C. L. Messer, Chairman.....	Marlette.....	Cashier.....	1889
	{ H. C. Morris, Secretary.....	Marlette.....	Attorney.....	1889
	{ F. J. Battersbee.....	Croswell.....	Teacher.....	1890
Schoolcraft.....	{ W. F. Riggs, Secretary.....	Manistique.....	Attorney.....	1889
Shiawassee.....	{ E. L. Griffith, Chairman.....	Laingsburg.....	Teacher.....	1889
	{ Jas. N. McBride, Secretary.....	Owosso.....	.....	1889
	{ Duane C. Cooper.....	Owosso.....	Farmer.....	1890
Tuscola.....	{ E. J. Darbee, Chairman.....	Caro.....	Teacher.....	1889
	{ H. E. Gordon, Secretary.....	Unionville.....	.....	1889
	{ W. F. Benklemann.....	Cass City.....	Teacher.....	1890
Van Buren.....	{ W. V. Sage, Chairman.....	Gobleville.....	Teacher.....	1889
	{ A. C. Martin, Secretary.....	Paw Paw.....	Journalist.....	1889
	{ Geo. Cornish.....	Lawton.....	Teacher.....	1890
Washtenaw.....	{ G. S. Wheeler, Chairman.....	Salem.....	Merchant.....	1889
	{ G. M. McDougall, Secretary.....	Ypsilanti.....	.....	1889
	{ M. J. Lehman.....	Chelsea.....	Attorney.....	1890
Wayne.....	{ Cholott Cady, Chairman.....	Wayne.....	Farmer.....	1889
	{ M. H. Winters, Secretary.....	Canton.....	.....	1889
	{ J. A. Sinclair.....	Belleville.....	Teacher.....	1890
Wexford.....	{ O. M. McLaughlin, Chairman.....	Manton.....	Teacher.....	1889
	{ H. C. Foxworthy, Secretary.....	Manton.....	.....	1889
	{ L. A. Tibbits.....	Cadillac.....	Teacher.....	1890

TABLE XXVIII.

General Statistics of State and Incorporated Institutions, Compiled from Reports of Officers for the Academic Year 1887-8.

Name of Institution.	Location.	Date of organization.	Name of Principal, President or Superintendent.	No. of instructors.	No. of students (or inmates) during year.	No. of graduates at last commencement.	Whole No. of graduates since founded.	Number of volumes in library.	No. of volumes added to library during year.
<i>State:</i>									
University of Michigan.....	Ann Arbor.....	1887	James B. Angell.....	98	1,677	413	9,467	68,942	8,544
Agricultural College.....	Lansing.....	1866	Edwin Willits.....	20	814	88	442	12,079	1,161
State Normal School.....	Ypsilanti.....	1863	John M. B. Sill.....	26	714	117	1,547	9,233	2,268
Michigan Mining School.....	Houghton.....	1885	M. E. Wadsworth.....	8	29	7	7	3,000	300
Michigan School for the Deaf.....	Flint.....	1864	M. T. Gass.....	24	201	25	231	2,030	186
School for the Blind.....	Lansing.....	1879	Geo. Barnes.....	9	87	.....	.....	1,562	.....
State Reform School.....	Lansing.....	1866	C. A. Gower.....	10	674	.....	.....	2,400	400
Industrial Home for Girls.....	Adrian.....	1879	Margaret Scott.....	6	296	.....	.....	670	28
School for Dependent Children.....	Coldwater.....	1871	Wesley Sears.....	6	407	.....	.....	1,800	180
<i>Incorporated:</i>									
Adrian College.....	Adrian.....	1869	G. B. McElroy.....	9	160	18	320	5,000	1,000
Albion College.....	Albion.....	1861	L. R. Fiske.....	19	451	23	209	6,000	879
Alma College.....	Alma.....	.....	Geo. F. Hunting.....	9	95	.....	.....	.....	.....
Battle Creek College.....	Battle Creek.....	1874	W. W. Prescott.....	15	888	18	.....	1,800	.....
Detroit College.....	Detroit.....	1881	John P. Frieden.....	16	263	18	37	6,560	500
Detroit Home and Day School.....	Detroit.....	1882	Jas. D. Liggett.....	15	240	.....	63	700	26
German American Seminary.....	Detroit.....	1861	Stephen Mart.....	5	175	.....	.....	400	45
Hillsdale College.....	Hillsdale.....	1855	Geo. F. Mosher.....	15	450	27	627	7,120	75

Hope College	Holland.....	1836	Chas. Scott	12	148	7	184	7,000	376
Kalamazoo College.....	Kalamazoo	1838	Monson A. Willcox	11	143	4	170	4,909	1,178
Olivet College	Olivet	1859	Horatio Q. Butterfield.....	16	377	18	244	15,000	1,258
Michigan Female Seminary.....	Kalamazoo	1856	Isabella G. French.....	6	41	4	107	1,438	108
Michigan Military Academy.....	Orchard Lake.....	1877	J. Sumner Rogers.....	8	141	17	115	800	76
Raisin Valley Seminary.....	Adrian.....		F. R. Hathaway	8	100	8	75	500	25
Somerville School.....	St. Clair	1881	Chas. O. Wetsell	7	53	3		487	
Spring Arbor Seminary	Spring Arbor.....	1872	A. H. Stilwell	4	100	8	89	850	

TABLE XXIX.
Financial Statistics of State and Incorporated Institutions, Compiled from the Reports of Officers for the Academic Year 1887-8.

Institutions.	Annual cost of tuition per student.	Average cost of board per week.	Total average annual cost per student (to the student).	Total average annual cost per student (to the State).	Estimated value of grounds, buildings, apparatus, etc.	Amount of productive funds.	Amount of Legislative appropriation for the year 1888.	Receipts from tuition fees during the year.	Receipts from all other sources.	Current expenses for the year.	Expenses for permanent improvements.	Liabilities.
<i>State:</i>												
University.....	\$20 00	\$4 00	\$190 00	*\$40 28	\$1,000,000 00	*\$27,407 00	\$54,250 00	\$72,235 25	\$126,008 35	\$163,653 67	\$48,789 45	.....
Agricultural College.....	.....	2 35	110 00	40 44	424,175 12	33,006 10	30,753 50	.....	16,554 88	44,564 67	40,783 13	.....
State Normal School.....	10 00	2 50	110 00	66 86	204,500 00	4,229 44	38,178 00	6,257 00	801 98	47,740 85	54,711 80	.....
Michigan Mining School.....	.....	4 50	46 32	630 69	40,000 00	.....	92,500 00	.....	1,360 62	18,000 00	24,590 74	.....
Michigan School for the Deaf.....	.....	1 00	41 66	187 24	476,823 58	.....	52,000 00	.....	.....	54,837 69	5,500 00	.....
School for the Blind.....	.....	.....	.....	284 77	170,469 91	.....	27,300 00	.....	.....	21,493 50	.....	.....
State Reform School.....	.....	.....	.....	77 15	235,000 00	.....	52,250 00	.....	16,019 21	76,074 73	11,744 54	.....
Industrial Home for Girls.....	.....	46	.....	153 07	168,184 65	77 85	43,000 00	.....	1,084 73	82,236 09	15,218 95	.....
School for Dependent Children.....	.....	.....	.....	84 84	204,678 00	.....	26,000 00	.....	.....	34,915 73	1,324 00	.....
<i>Incorporated:</i>												
Adrian College.....	30 00	2 00	.....	.....	300,000 00	6,000 00	.....	6,800 00	.....	11,800 00	2,300 00	\$21,500 00
Albion College.....	.....	2 25	.....	.....	100,000 00	12,000 00	.....	18,329 25	158 19	21,337 85	.....	19,000 00
Alma College.....	15 00	2 25	.....	.....	50,000 00	10,000 00	.....	1,204 00	1,950 00	14,654 00	1,000 00	1,500 00
Battle Creek College.....	35 00	2 75	.....	.....	104,293 68	.....	.....	2,800 03	31,607 28	24,054 97	25,000 00	43,957 48
Detroit College.....	40 00	.....	.....	.....	97,000 00	.....	.....	7,487 00	1,200 00	5,500 00	240 00	15,000 00
Detroit Home and Day School.....	50 00 100 00	8 00	.....	.....	50,000 00	.....	.....	14,077 28	6,367 39	19,523 74	680 00	.....
German American Seminary.....	15 00	.....	.....	.....	25,000 00	.....	.....	2,150 00	.....	2,300 00	250 00	6,000 00
Hillsdale College.....	2 00	100,000 00	10,646 23	8,308 65	14,536 30

STATE AND INCORPORATED INSTITUTIONS.

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Hope College.....	15 00	2 50	40,000 00	112,060 07	7,210 00	2,326 00	8,639 01	14,133 63	375 00	2,000 00
Kalamazoo College.....	25 50	2 25	.....	119,000 00	105,000 00	7,357 84	.....	2,643 29	7,001 66	12,629 84	.....	.....
Olivet College.....	30 00	2 25	.....	140,000 00	169,500 00	5,381 00	.....	4,783 00	10,900 00	19,512 00	4,500 00	5,000 00
Michigan Female Seminary.....	6200 00	6 5 13	.....	50,000 00	30,000 00	2,000 00	.....	7,200 00	.....	9,000 00	1,000 00	.....
Michigan Military Academy.....	6350 00	.....	.....	125,000 00	.....	.....	.....	.....	.....	.....	.....	.....
Raisin Valley Seminary.....	22 00	2 00	.....	30,000 00	20,000 00	1,200 00	.....	1,300 00	500 00	2,600 00	250 00	.....
Somerville School.....	40 00	7 50	.....	50,000 00	.....	.....	.....	5,600 00	6,000 00	9,000 00	1,500 00	.....
Spring Arbor Seminary.....	18 00	2 25	.....	10,000 00	.....	.....	.....	1,100 00	.....	1,100 00	150 00	.....

a Including room rent. b Including amount received for board. c Including amount of tuition per week. d Including Incidentals.
* Change of law makes the report for 1/4 year.

DOCUMENTS

ACCOMPANYING THE

REPORT

OF THE

SUPERINTENDENT OF PUBLIC INSTRUCTION.

UNIVERSITY OF MICHIGAN.

PRESIDENT'S REPORT.

To the Honorable the Board of Regents :

I beg leave to present to you my annual report for the year ending September 30, 1888.

The following changes in the Faculties have occurred :

At the meeting of the Board in October, 1887, Charles M. Gayley, A. B., was appointed Assistant Professor of English and Rhetoric; Fred. G. Novy, M. S., Instructor in Hygiene and Physiological Chemistry for one year; Conrad George, M. D., Instructor in Materia Medica for one year; Assistant Professor Charles N. Jones, A. B., Professor of Applied Mathematics; C. F. Sterling, M. D., Professor of Ophthalmology and Otology in the Homœopathic Medical College in the place of D. J. McGuire, M. D., resigned; and Heneage Gibbs, M. D., Professor of Pathology in the Department of Medicine and Surgery. The resignation of William H. Payne, A. M., Professor of the Science and the Art of Teaching, was accepted.

At the February meeting the action of the Executive Committee in appointing N. S. Hoff, D. D. S., Assistant Professor in the Dental College for the remainder of the year, and in appointing J. F. McCulloch, Instructor in Mathematics to serve from November 1, 1887, to the end of the year, was approved; B. A. Hinsdale, Ph. D., was appointed Professor of the Science and Art of Teaching; Dr. Henry F. Lyster was appointed Professor of the Theory and Practice of Medicine and of Clinical Medicine in the Department of Medicine and Surgery in the place of Dr. A. B. Palmer, deceased; and the resignation of J. M. Schaeberle, Instructor in Astronomy, was accepted.

At the March meeting the resignation of John Dewey, Ph. D., Assistant Professor of Philosophy, to take effect Oct. 1, 1888, was accepted; and W. S. Hough, A. M., was appointed Instructor in Philosophy for the next year.

At the June meeting the resignations of Professor C. N. Jones, Alfred Hennequin, Instructor in Modern Languages, and Dr. Geo. A. Hendricks, Instructor in Anatomy and Curator of the Medical Museum, were accepted; Professors William P. Wells, Levi T. Griffin, and Bradley M. Thompson, and Assistant Professor J. C. Knowlton, whose terms had expired were re-appointed to their chairs in the Law Department, Hon. Henry B. Brown was appointed Lecturer on Admiralty, and Professor M. M. Bigelow, Lecturer on Insurance, for the coming year, and Professor Wm. G. Hammond, Lec-

turer on the History of Common Law for the year 1889-90; Richard Hudson was promoted from the Assistant Professorship to the Professorship of History, and Andrew C. McLaughlin from the Instructorship to the Assistant Professorship of History; Barclay T. Trueblood, Ph. D., was appointed Lecturer on General Chemistry for one year to the Medical classes; George W. Whyte, Lecturer on Metallurgy for one year; and the following persons were appointed Instructors for one year: S. W. Clary, Instructor in German, F. G. Novy, Instructor in Hygiene and Physiological Chemistry, A. F. Lange, Instructor in English, W. W. Campbell, Instructor in Astronomy, Alexander Ziwet and Charles Puryear, Instructors in Mathematics, and David H. Browne, Instructor in Quantitative Analysis.

Professor Henry Sewall was granted leave of absence for the coming year.

The title of Prof. Langley was changed to Professor of General Chemistry and Metallurgy, and that of Dr. Arndt to Professor of Materia Medica and Therapeutics and Clinical Professor of Diseases of the Nervous System.

At the July meeting the following appointments were made for one year: Walter Miller, Acting Assistant Professor of Latin, Joseph H. Drake, Instructor in Latin, Lewis A. Rhoades, Instructor in German, F. N. Cole, Ph. D., Instructor in Mathematics; Lucius L. Van Slyke, Ph. D., was appointed Lecturer on General Chemistry for the Second Semester in the Literary Department, Instructor de Pont was made Assistant Professor of French and Registrar of the Literary Department; and the resignation of Calvin B. Cady, Professor of Music, was accepted.

At a meeting of the Executive committee on Sept. 17, N. S. Hoff, D.D.S., was appointed Assistant Professor of Practical Dentistry for another year, and Albert A. Stanley was appointed Professor of Music.

During the year the University has been bereft of four Professors by death. In no previous year of its existence has it suffered so heavy affliction.

On December 20, 1887, Dr. A. B. Palmer died after a brief period of confinement to his house, though doubtless the fatal disease had been for some time making inroads upon his vigorous constitution. He had been a Professor in the Department of Medicine and Surgery since 1854. He had occupied different chairs in the Faculty, and had for years been the Dean. A more devoted and industrious teacher has never been in the service of the University. The great purpose of his life seemed to be to secure the prosperity of the Institution and especially of the Department, for which he labored so faithfully during all the thirty-four years of his official connection with it.

On March 6, 1888, Byron W. Cheever, Acting Professor of Metallurgy, died after an illness of only a few days' duration. Dr. Cheever was a graduate of the Literary, Medical and Law Departments of this University. It need hardly be added that he was a man of varied attainments. He was rapidly making an enviable reputation as a metallurgist by his explorations and his writings. He was an exacting, faithful and successful teacher.

On May 3, 1888, Dr. Edward S. Dunster, who had filled the chair of Obstetrics and Diseases of Women and Children since 1873, yielded to the power of disease with which in one form or another he had for a long time contended. As a medical lecturer he had few equals. A charming personal address, a terse but graceful diction, a generous literary culture, an abundant learning in his profession, a lucid and systematic arrangement of his thoughts, gave a singular attraction to his public instruction. His writings

had given him a wide reputation in his branch of the medical profession. In his mental constitution and his temperament he exhibited in a marked degree the traits of his distinguished ancestor, the first President of Harvard University.

On August 16, 1888, Elisha Jones, Associate Professor of Latin, after an illness of several months, died in Colorado, whither he had gone in the hope that the climate might be beneficial to him. He had faithfully served his Alma Mater for some fourteen years as a teacher of the Latin and Greek classics. He was an accomplished scholar and most successful instructor. His sincere, frank and earnest character commanded the respect and won the affection of his colleagues and his pupils. The text-books which he had prepared had made his name widely and honorably known.

The University will hold in grateful recollection the faithful services of these men who have fallen at their posts of duty. Fortunate will she be, if she can make their places good.

Professor C. N. Jones, who turns from academic to business pursuits, had been connected with the Faculty since 1874. He had the rather unusual gift of making the study of mathematics agreeable even to pupils who had not a special taste for that branch, while at the same time he held them to effective work.

Professor Payne has accepted the very important position of President of the State College of Nashville, an institution which by the aid of the Peabody Fund devotes its energies largely to giving southern students a normal training of collegiate grade to prepare them for filling important positions as teachers in the Southern States. The Chair of the Science and the Art of Teaching in this University, to which he was called in 1879, was, I think, the first chair of the kind established in any American University. The Regents observed that we were annually graduating a considerable number of persons who, without having had any special training in pedagogy, were called at once to the responsible duties of principals of high schools or even of superintendents of the public schools of cities. Our relation to the public school system of the State and to these graduates seemed to lay on us the duty of giving them some special and adequate preparation for the important educational work which they were to undertake. In discharging this duty the Regents were singularly fortunate in securing the services of Mr. Payne as Professor. With no precedents in American Universities to guide him, he addressed himself to his new work with so much prudence, skill, and enthusiasm that his instruction proved even more beneficial to the students and to public education than the Regents had expected such a course of teaching would be. The nature and the usefulness of his work have become widely known, and other leading universities have imitated us in establishing chairs for instruction in pedagogics.

Professor Cady, who has resigned after a connection of eight years with the University, has rendered a most valuable service to us and to this community by elevating the standard of musical taste, and by awakening an enthusiasm for the study of classical music. Upon him fell the somewhat difficult task of organizing the work of musical instruction in the University and of convincing men that such instruction was a proper and useful part of the work of a university.

Assistant Professor John Dewey has left us to take charge of the department of philosophy in the University of Minnesota. He has shown by his

ability, learning, and skill as a teacher that his promotion to a full chair is well merited, and our best wishes follow him to his new field.

Mr. Hennequin had been a member of the Faculty since 1872. His linguistic talent and his familiarity with the principles and the art of dramatic composition should open to him a successful literary career.

The change in Professor Langley's title indicates an important and useful change in the organization of the work in general chemistry, physics and metallurgy. The instruction in physics in the Literary Department was heretofore divided between the professor of physics and the professor of general chemistry, and the instruction in the latter branch was rather too limited in extent. On the other hand the instruction needed in metallurgy does not require the full time of a professor. Professor Langley, who has had large experience in metallurgy, being relieved of the duty of instructing in physics in the Literary Department, and of lecturing on chemistry to the medical classes, can give the needed instruction in metallurgy and enlarge his work in general chemistry in the Literary Department, and the teaching of physics will be left wholly in the hands of the professor of that branch. Provision will have to be made for securing lectures on general chemistry to the medical students. That work will naturally fall to one who can also teach some of the applications of chemistry or electricity to the medical art.

Professor Sewall having leave of absence for the coming year on account of impaired health, and Professor Langley having permission to be absent in Europe on important scientific business, temporary provision has been made by appointments above named, to supply their places. Owing to these absences, to resignations of teachers, and to deaths, we have been called to make an unprecedented number of appointments. We trust, however, that they have been made with so much care that there will be no serious interruption of continuity in our work.

The degrees conferred were as follows:

DEGREES ON EXAMINATION.

Bachelor of Letters.....	18-
Bachelor of Science (Course in Biology).....	1
Bachelor of Science (Course in Chemistry).....	4
Bachelor of Science (Course in Mining Engineering).....	1
Bachelor of Science (Course in Mechanical Engineering).....	7
Bachelor of Science (Course in Civil Engineering).....	12
Bachelor of Science (Course in General Science).....	8
Bachelor of Philosophy.....	19
Bachelor of Arts.....	53
Master of Philosophy.....	2
Master of Arts.....	5
Doctor of Philosophy.....	2
Doctor of Medicine (Department of Medicine and Surgery).....	65
Bachelor of Laws.....	115
Pharmaceutical Chemist.....	23
Doctor of Medicine (Homœopathic Medical College).....	13
Doctor of Dental Surgery.....	37
	<hr/> 415

HONORARY DEGREES.

Doctor of Medicine.....	1
Doctor of Laws.....	2
	<hr/> 418

The number who graduated with the Bachelor's degree from the Literary Department was 123, larger by 22 than the number in the class of 1875, which has heretofore borne the honor of being the largest graduating class. It numbered 101.

The number of students in attendance during the year was as follows :

DEPARTMENT OF LITERATURE, SCIENCE, AND THE ARTS.

Resident graduates.....	23
Graduates studying <i>in absentia</i>	36
Candidates for a Degree.....	563
Students not candidates for a Degree.....	126— 748

DEPARTMENT OF MEDICINE AND SURGERY.

Resident Graduates.....	2
Third Year Students.....	63
Second Year Students.....	108
First Year Students.....	137— 310

DEPARTMENT OF LAW.

Seniors.....	154
Juniors.....	181
Special Students.....	6— 341

SCHOOL OF PHARMACY.

Resident Graduate.....	1
Second Year Students.....	26
First Year Students.....	63— 90

HOMŒOPATHIC MEDICAL COLLEGE.

Students—Total in the College.....	74
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COLLEGE OF DENTAL SURGERY.

Students—Total in the College.....	104
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1,667

The number of students was greater than that in 1886-7 by 105. It exceeded that of 1885-6 by 276 and that of 1884-5 by 382. The largest gain last year, as in the previous year, was in the Literary Department, 60; though there was an increase in every Department except in the Department of Medicine and Surgery, in which there was a loss of eight. The number of graduates studying for higher degrees either here or *in absentia* continues to increase, having risen from 42 in the previous year to 59 in the last year.

The number of women in attendance in 1886-7 and in 1887-8 was as follows:

	1886-7.	1887-8.
Department of Literature, Science and the Arts.....	175	194
Department of Medicine and Surgery.....	51	52
Department of Law.....	6	3
School of Pharmacy.....	2	2
Homœopathic Medical College.....	27	23
College of Dental Surgery.....	4	6
	<hr/> 265	<hr/> 234

The relative as well as the absolute number of women in the University continues to increase very slowly. Last year they formed sixteen and eight-

tenths per cent, this year they form sixteen and nine-tenths per cent, of the total attendance. Last year they constituted twenty-five per cent. and this year they constituted twenty-five and seven-tenths per cent. of the entire attendance in the Literary Department. Twelve of the fifty-three graduates studying for higher degrees during the year are women.

The 563 candidates for bachelors' degrees in the Literary Department are divided as follows in respect to their courses: Bachelor of Arts, 175; Bachelor of Philosophy, 112; Bachelor of Science (Course in General Science) 59; Civil Engineer, 61; Mechanical Engineer, 33; Mining Engineer, 11; Bachelor of Science (Course in Chemistry), 10; the same (Course in Biology) 2; Bachelor of Letters, 100.

Of late years there has been a relative and absolute increase of the number, of students in the English, Engineering and Scientific Courses, but the Classical Course still attracts a much larger number than any other.

It may be of interest to see in what proportions the men and in what proportions the women choose the different courses. The following table shows the percentage of the men, and the percentage of the women, in both cases candidates for degrees in the Literary Department, who chose each course during the last year:

	Percentage of Men.	Percentage of Women.
The A. B. Course	80.7	82.8
The Ph. B. Course	18.8	81.4
The B. S. Course	13.	9.8
The B. L. Course	15.	27.
The Engineering Courses	25.	None
	100.	100.

The women have of course no practical inducement to enter on the engineering courses, though in years past now and then one has completed one of those courses. It will be observed that a larger proportion of women than of men are taking by choice the full classical course. They are led to this not alone by their literary taste, but also by the consideration that there is a demand for their services in teaching Greek in preparatory schools. As one-fourth of the men are drawn to the engineering work, the women naturally form a larger proportion than the men of the students pursuing the Ph. B. Course, which contains Latin and the Modern Languages, and of the B. L. Course, which also contains the Modern Languages and allows large liberty of choice in English Literature, History and the Sciences. The B. S. Course, which is planned to train teachers of science and scientific experts, attracts a larger proportion of men than women.

The general order and spirit of study have been, as usual for some years, most commendable. One new offence has, however, been committed, of which a due regard for the friendly relations of colleges makes it wise to speak. Three students came here from a reputable college, and received credit for advanced standing in mathematics on the strength of forged certificates, purporting to be signed by the Professor of Mathematics in that institution. After a few months the forgery was discovered and the offenders were of course expelled. These cases show that precaution is needed in accepting students from other colleges, and that it may become necessary to

require the official seal of a college on papers that certify the standing of its students.

During the year there has been a considerable increase in the number of schools which are maintaining the "diploma relation" with us. In 1886-7 there were 43; in 1887-8 there were 58. Among these are ten High Schools in Chicago and cities and towns adjacent to Chicago. That is an important field from which we ought to draw and may properly expect to draw a larger number of students than we have received in the past. Every year's experience adds strength to the conviction that few steps more beneficial both to the University and to the schools have been taken by the University authorities than the establishment in 1870 of the "diploma system" of receiving students. If that system has met with less success in some other States, it is because the conditions under which we work do not there exist, or because the precautions which are here observed in making use of the plan have been there omitted.

The very welcome pressure on us for instruction in the studies pursued on the courses leading to higher degrees still continues. It adds a considerable burden to some of our professors already heavily tasked, in conducting the work of undergraduates. But one of the tests of a successful teacher is found in his power to stimulate pupils to push their studies beyond the limits of an undergraduate course, and one of his most gratifying rewards comes from seeing them fired with a zeal to pursue into the higher ranges the branches which he teaches.

In this connection grateful mention should be made of the action of the society of women graduates of various colleges, known as The Association of Western Alumnae, for assigning to this University for this year the use of a fellowship which they have endowed. The holder will receive the sum of three hundred and fifty dollars to aid her in pursuing advanced studies here during this academic year.

Could we have a few endowed fellowships, they would be of the greatest service in retaining here some of our most brilliant scholars for the pursuit of special studies. The Regents of the University of Wisconsin have established eight, yielding four hundred dollars each. The holders are required to teach certain branches in the University, if asked to do so. There is some subordinate work of instruction in which persons of such attainments as the holders of fellowships ought to be, could be, made useful. On this ground perhaps the use of our funds for the establishment of fellowships could be justified. Fellowships have been endowed in most of the stronger Universities of the country. They have been especially useful in training students for professorial chairs in our colleges. Our graduates have been for some time making praiseworthy efforts to establish fellowships here. Those who have been exerting themselves deserve more encouragement from other alumni and friends of the University than they have received.

The Engineering Laboratory is now nearly completed, but a considerable addition to the equipment is needed. The accommodations it affords for shop work are none too large for our present number of engineering students. The new building erected for the Physical and Hygienic Laboratories is now finished and occupied though not entirely furnished. It is with great satisfaction that we see at last adequate provision for teaching Physics. The Hygienic Laboratory is, I think, the first established by any of our Universities. We trust that it will prove of great service to the State and to the

wider public by the investigations, which will there be conducted, of hygienic and sanitary problems. But already, at the very opening of instruction in this Laboratory it proves that the lecture room is not large enough to seat the students who wish to attend the lectures.

As our facilities for teaching science and its practical applications especially to Civil, Mining, Mechanical, Electrical, and Sanitary Engineering have been enlarged, the demand for such teaching has rapidly increased. Attention has already been called to the fact that one-fourth of our candidates for degrees are pursuing courses in Engineering. It is probable that the ratio will increase rather than decrease.

The Department of Medicine and Surgery, although it has suffered the heavy loss of two of its older professors, and although it has been somewhat agitated by the continuance of the discussion of the question of transferring a part of the medical instruction to Detroit, has had a fairly prosperous year. But, as I suggested in my last report, it is very essential to the good of the Department that the question of removing the clinical teaching be settled at an early day. If the removal is wise, the sooner it is effected the better. If it is not wise, the sooner that is declared to be the deliberate opinion of the Board of Regents, the better will it be for the internal harmony and prosperity of the Department. I ask your indulgence while I present some considerations on the subject of the removal.

The substantial import of the proposition which has been most strongly urged is, as I understand it, that our medical students, after spending two years here in pursuing what are called the more didactic branches, shall repair to Detroit, where during the third year of their course they shall receive clinical instruction in connection with the hospitals of that city.

At the outset it is obvious that there are very grave objections to the plan, which can be outweighed only by very great advantages to be gained. Let us notice briefly some of the objections, and then inquire what are the advantages.

1. It is clear that the administration of the Department will be made more complicated and difficult. There must be a special organization for the conduct and supervision of the work in Detroit. A considerable number of professors resident in Detroit, and not teaching on the University grounds, must be added to the Faculty. Questions not altogether easy to answer, concerning relative authority and power of resident and non-resident professors and concerning other points are not unlikely to arise.

2. It will, I think, be more expensive for our students and certainly for such of our resident professors as have clinical instruction to give. I doubt if students can find comfortable homes and board at Detroit for the same rates which are paid by them here, and their incidental expenses are in my opinion certain to be larger there than here. The resident professors could not be asked to go to Detroit to teach without having their additional expenses borne by the University.

3. The University would probably soon be called to make more serious additions to its expenditures than that just referred to. We have been told that Detroit physicians, who would be necessarily added to the Faculty, are willing to serve for little or no compensation. Possibly that would be the case at the outset. But we have a pretty large and suggestive experience which indicates that the University cannot be fortunate enough to secure the services of competent men for any considerable time on so favorable

terms. Nor is this a fact to be complained of. We can hardly ask eminent practitioners in Detroit to take time from their remunerative professional work to serve us for less proportionate compensation than our resident professors receive.

4. The students would be deprived of the use of the University library and of the other incidental advantages of University life. With no desire to overrate these, I believe that they have a very considerable value in enlarging and enriching the culture of the students. The under-graduates cannot as a class live here three years without catching something of the breadth and spirit of a true University training, which all will admit is far better than a mere narrow, technical, professional training.

5. But what assurance can we have that the students will go to Detroit, if we make the proposed arrangement? The opportunities proposed to be offered for clinical instruction are now open to the students of the medical college already established in Detroit. Do these opportunities now attract our students in any considerable numbers? We know that they do not. Our students who wish for larger clinical advantages than we have offered pass by Detroit and go to New York or Philadelphia. Will they not continue to do so? Is there not good ground to fear that the very object for which the proposed change is suggested will not be attained even if we make the effort recommended?

6. It seems probable that if a part of the work of the Department is carried to Detroit, and is successfully prosecuted there, a strong pressure will be exerted on this Board to transfer the whole work of the Department there. The difficulties of divided administration, contrasted with the obvious advantages of concentration and unity, and the larger opportunities for remunerative practice of the professors in Detroit, the possibility, not to say the probability, that at no distant day a majority of the Faculty must be residents of that city, will inevitably produce a strong influence in that direction. The discussion of the subject would renew in the college the unrest which has been caused during the last few years by the debate upon the expediency of removing the clinical instruction to Detroit. To some the transfer of the whole work of the Department to that city may seem desirable in itself. To me it seems most undesirable, whether we consider the interests of the Department or of the whole University. Statistics show beyond dispute that the Department by its growth has contributed most powerfully to the growth of the other Departments, as they have contributed to its strength. Medical students who have pursued their course here on the ground have been instrumental in turning many students hither for work in other Departments as well as in their own, and in turn the students in other Departments have commended the Medical School to their neighbors and friends. But if it should ever come to pass that the medical students do all their work in Detroit, they will have none of the pride or interest in the general work of the University which now animates them and leads them to urge men to come here for collegiate or legal education. In fact they will have no opportunity to learn from personal observation and experience anything of the life and spirit of the University. On the other hand the students in the other Departments have here become familiar enough with the work of the Medical Department to direct the attention of their friends to it; but their knowledge of it and interest in it would be far less, if it were transferred to Detroit.

7. It must further be remembered that every argument which can be urged for removing the clinical instruction in the Department of Medicine and Surgery to Detroit is equally valid for removing the Homœopathic Medical College there also. A large hospital, to be placed in charge of homœopathic physicians, is in process of erection in that city. We may be sure that there would be a demand on us from friends of the Homœopathic College that their students should have facilities for clinical instruction in Detroit, if the arrangement proposed should be made. This would be urged, and with justice, on the ground that both schools should be treated alike. The result would be that for a time at least we should have four medical schools or parts of schools to manage and maintain. Indeed it is not certain that in due time there would not be a demand by the dentists that a part at least of the work of the Dental College should also be transferred to Detroit, since the work of the dental students is closely associated with that of the medical students, since they must receive some instruction in surgery, and since also the Faculty could then be enlarged by the addition of Detroit practitioners who could assist in clinical teaching. Does not all this mean a dangerous disintegration of life and calamitous diffusion of force?

8. At present there is not a little valuable assistance rendered by the Departments to each other, which would have to be surrendered in large degree or altogether. Professors in one Department give brief courses of lectures in one or more of the other Departments, and so supplement or enrich the instruction. This would be much more difficult, if it were at all practicable, in case of the disintegration suggested.

9. There is danger that the branch in Detroit and the fragment of the school here would soon come to have rival interests. It would be natural that the Detroit branch, having perhaps a larger number of professors connected with it and emphasizing the value of its share of the work, which being clinical, impresses the public and impresses students more than the dryer, but not less important, didactic work, should claim more attention and more help from the Regents than the portion of the school which is here. At any rate, a strong and troublesome difference of opinion on that point and on other points might easily spring up.

10. Is it not quite possible that if the Department, either in whole or in part, should be planted in Detroit, it might receive a less hearty support from the State? Is it not altogether conceivable that the legislators would say, "Detroit has asked for the Department, Detroit is quite able to support it. Let her take care of it." Small and lacking in wealth as this city is, we have more than once heard from legislators when we asked for help the inquiry: "What has Ann Arbor done? Why does she not show some interest in the University?" How much more emphatically should we hear the inquiry concerning the populous and wealthy city of Detroit?

Those objections to the proposed scheme, I think it must be confessed, are serious. Are they outweighed by the advantages which may be secured by the adoption of it? What are the advantages which are promised?

1. It is said that the hospitals of Detroit which would be made accessible to our students, furnish more cases and more valuable cases than our hospital to illustrate the instruction in surgery, gynecology and obstetrics. This is true. But it is possible to overrate the advantages which they offer in comparison with those offered here. If I am correctly informed, the average

number of patients in Harper Hospital and in St. Luke's Hospital, which are the principal ones on whose help we should depend, is only two or three times as great as the number the University Hospital accommodates, and a considerable proportion of the persons in the Detroit hospitals are private patients, who would not be brought before the classes. When a committee of this Board visited Harper Hospital at the invitation of citizens of Detroit some months ago, they were surprised to find that it had not then as many patients as the University Hospital. The statement which the President of the Michigan Medical Association, a practitioner in Detroit, made in his address at the last meeting of that body, indicates that the condition of the hospitals in that city leaves much to be desired. He said, "There is no hospital in this city (Detroit) which is properly equipped, or which has money enough to pay its running expenses without financial embarrassment." It must be remembered also that the Detroit hospitals cannot be placed under the control of this Board. Is there not a possibility that under the influence of some rival medical school embarrassments might arise in our relations with one or more of the hospital boards?

2. It is argued that the transfer of a part of our medical work to Detroit would awaken a deep interest in the University in that city and would even secure large benefactions from its citizens. The interest and the benefactions would be most acceptable, and we are glad to say that the past generosity of some of the citizens of Detroit to the University makes such a result seem not improbable. But thus far no distinct propositions of assistance have been made to this Board.

3. It is predicted that the transfer would lead to the dissolution of any medical schools now existing in Detroit, and would prevent the establishment of new schools. Thus concentration in medical teaching in the State would be secured. It is also affirmed that the students who now attend the Detroit schools would be added to our number.

I see no sufficient ground for assuming that there will be no other medical schools than ours at Detroit, especially if we do not move the whole Department there. Wherever there are aspiring physicians in a city as large as Detroit, and particularly where medical schools have existed for some years, certain practitioners generally find it conducive to their own interests to join in carrying on a medical school. We can hardly expect that the accomplished physicians of Detroit, who have had the enterprise to conduct two medical schools for years, will refrain from maintaining a school because of our giving clinical instruction in Detroit to our senior class.

Nor do I see any good reason to expect that if the schools in Detroit were abandoned, we should receive any considerable number of their students. For their classes are largely made up of those who wish a short course in medicine, and are not willing to take our three years' course. They would be more likely to turn to some school which gives a degree on the completion of a briefer course.

So far as I know, the advantages here considered are all which have been suggested as likely to accrue from the plan before us. It is for this Board to decide whether they so far outweigh the objections named as to make the adoption of the plan wise. My own conviction is that they do not, and therefore that it is inexpedient to transfer any part of our work to Detroit.

The experience of the European Universities which are established in comparatively small cities sustains the view that it is not essential to the success

of a medical school that the clinical instruction should be given in some great city, apart from the University. What would be thought at Tübingen or Bonn or Jena or Würzburg or Oxford of the proposition to divide the work in medicine and carry a part of it away from the rest and from the University? Yet these Universities and others situated in small cities are not without a good reputation for instruction in medicine and surgery. So far as I have heard, the experiment of making such a division of the medical work as is here proposed has not been attempted anywhere. So unprecedented a step should not be made without far clearer and more cogent evidence than has yet been presented that it will be beneficial to the Department and to the University.

But meanwhile let the statement be emphasized, that if we are to depend solely on our own hospitals for aid in clinical instruction, we should have the means of making them as good as possible. It is most desirable to have a lying-in hospital. Our hospital buildings were not intended for long use. On every account we could wish that new buildings for hospital purposes might be erected on some site a little removed from the campus. If a suitable hospital should be built by the State, many patients now remaining in the county alms-houses, where they do not receive the care of skilled surgeons and ophthalmologists, could be sent here for treatment, and soon restored to a condition of self-support. It would doubtless be a real economy for the counties, which may now be burdened with the cost of maintaining through life persons who have curable maladies, to send such patients here. To some extent they do this now. But with ampler accommodations more patients could be cared for, and the interests of the counties, of the patients, and of our medical school would at once be subserved.

The Homœopathic Medical College has had a prosperous year. It has enjoyed internal harmony and freedom from attack from without. We have reason to hope that the profession in the State are now generally prepared to give it that hearty support which is essential to its highest usefulness.

The work of the Law Department has been carried on in a very satisfactory manner. The experiment of employing a few non-resident lecturers for more or less extended courses of instruction has been tried with good results. Professor Hammond, Dean of the St. Louis Law School, gave a course of 15 lectures on the History of the Common Law; Hon. H. B. Brown, United States District Judge, a course of 12 lectures on Admiralty Law; and Professor M. M. Bigelow, of the Law School of the Boston University, lectured during a large part of the second semester on Equity. These gentlemen will hereafter continue their lectures. The standard of work required of the students has been materially raised during the last two or three years, and the examinations for graduation are more stringent than they ever were before.

The School of Pharmacy continues to deserve and to enjoy its pre-eminent reputation for thoroughness. By the courage with which its standard of work has been maintained and from time to time raised, it has been largely instrumental in elevating the standard of other schools in the country.

For the accommodation of this school and of our great number of students of chemistry, drawing from every Department of the University except the Law Department, there is urgent need of another enlargement of the Chemical Laboratory.

The Dental College, in spite of the continual and rapid increase of require-

ments for graduation, attracts larger and larger classes every year. Three years' study, a longer course than that in any other Dental School, is now essential to graduation. The course will be graded. This elevation of our standard is warmly approved by the best members of the dental profession in the country, and is heartily commended in Europe, where the reputation of the School is well established.

An enlargement of the building occupied by the Dental College can not much longer be delayed, unless we deliberately refuse to receive well prepared applicants for admission. Serious inconvenience in giving instruction to our students was caused last year by the inadequacy of our accommodations. It is a most embarrassing problem how to care for the larger number in attendance now.

The most important facts concerning the collections in our Museums are these:

Another shipment of the Rogers Statuary has been received from Rome. It consists of colossal figures, including the statues of Lincoln and Seward, those of Nelson and Lewis on the monument at Richmond, Va., the symbolical figures of Michigan on the Detroit battle monument, America on the Rhode Island monument, Victory on the Worcester monument, and the Sentinel on the Cincinnati monument. The casts of the bronze doors of the Capitol at Washington are yet to be sent. When they are received the collection will be complete, a worthy monument to the genius and the generosity of the artist. The value of these casts, especially of the casts of the statues, busts, and medallions of the great historic characters of the Civil War, will increase with the lapse of years. No collection worthy to be compared with it in this particular is found in any other University, if indeed there is any in the country. Our embarrassment in finding suitable places for the colossal figures just received strongly suggests our need of a more spacious Art Gallery than we now possess.

Our Museum of Zoölogy is about to receive some important additions, the fruits of a scientific expedition which Professor Steere, accompanied by one of our recent graduates and by two of our undergraduates, has made during the past year to the Philippine Islands. It is believed that these naturalists have found a considerable number of new species of birds and even some of mammals, and have obtained evidence which may materially modify accepted theories concerning the distribution of the fauna of that interesting group of islands.

From the Librarian's report it appears that the total number of volumes in all the libraries is now 67,759, and of pamphlets 13,892. During the year we have added to our collection 5,361 volumes and 1,278 pamphlets. The most important gifts were the Dorsch library, presented by the widow of the late Dr. Dorsch, of Monroe, in compliance with his wishes, 1,676 volumes and 148 pamphlets; a gift of 356 volumes and 90 pamphlets, mainly on Irish history, by George C. Mahon; and a complete set of Liebig's Annalen, presented by E. C. Hegeler. The total number of periodicals regularly received is 242. The volumes drawn during the year numbered 94,168. It is doubted if any other library is so much used.

Our annual finance report shows how severely our needs press upon our resources. It is only by the greatest watchfulness and economy, by the unpleasant refusal to grant many reasonable requests for help from various departments of teaching, that we are able to accomplish our work with so

small an outlay. We greatly need some provision for adding to our general fund. No similar institution of a magnitude comparable with ours is carried on without a much larger outlay than we make. Now, as always, we must rely on the State for aid. We entrust our fortunes to her appreciation and generosity with unabated confidence.

JAMES B. ANGELL.

APPENDIX A.

FINANCE REPORT.

To the Honorable Board of Regents:

GENTLEMEN—The Finance Committee herewith present their estimate of receipts and expenditures for the fiscal year, ending June 30, 1889, and also the Treasurer's statement of receipts and disbursements for the time between September 30, 1887—being the date of his last statement—and June 30, 1888, the latter date included.

The books and vouchers of the Secretary and Treasurer have been carefully examined and checked, and the Treasurer's account verified in detail, and the same are substantially correct.

The balance on hand June 30, 1888, is \$8,327.57, but it will be observed from the estimate of expenditures for the present fiscal year that with a continuance of the stated appropriations by the Legislature, there will still remain a deficit \$8,664.67. It will be noted also that the estimates are based upon present charges, and consequently that the increase of current expenses must swell the deficit.

One of the causes of this expected deficiency is the extra expenditure for buildings, which it seemed impossible to avoid, and which has decreased our present balance. We may well hope that the coming Legislature will reimburse the general fund for the amount drawn from it for the above purpose. It would seem wise, however, to exercise a careful economy, and so guard against outlays, which are not indispensable, that if possible, the deficit may be less than estimated.

A large sum is still due from the State upon building appropriations, but this will all be expended within the next few months in the completion of the buildings now under construction. It will be remembered also that these are special appropriations and cannot be diverted.

While your committee regret that a deficit should appear in the estimates, and urge careful attention to the above suggestion as to economy, we still believe that this should not be pressed so far as to cripple the University; its *necessities* must be provided.

Respectfully submitted,

CHARLES J. WILLETT, *Chairman.*

MOSES W. FIELD.

CHARLES HEBARD.

UNIVERSITY OF MICHIGAN.

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ESTIMATE OF RECEIPTS AND DISBURSEMENTS FOR THE YEAR ENDING JUNE 30, 1889.

ESTIMATED RECEIPTS.

Balance in Treasury July 1, 1888..... \$8,897 57

To be received from the State on the following accounts:

University interest.....	\$38,000 00	
1-20th Mill Tax.....	47,272 50	
Homœopathic Department.....	12,200 00	
University Hospital.....	2,500 00	
College of Dental Surgery.....	4,000 00	
Scientific Laboratories.....	15,000 00	
Contingent.....	6,250 00	
Books for Libraries.....	5,000 00	
Physical Apparatus.....	1,000 00	
Additional Salaries.....	2,500 00	
Repairs.....	5,000 00	
		<u>\$147,050 07</u>

To be received from other sources as follows:

Students' Fees and Laboratory Deposits.....	\$70,000 00	
Sale of Dental Supplies.....	3,500 00	
Sale of Anatomical material.....	200 00	
Sales at University Hospital.....	700 00	
Sales at Homœopathic Hospital.....	300 00	
Interest on Bank Deposits.....	1,000 00	
		<u>75,700 00</u>

Amount of Estimated Receipts..... \$222,750 07

ESTIMATED DISBURSEMENTS.

For Salaries of Professors, officers and Employés:

In College of Dental Surgery.....	\$8,468 68
Homœopathic College.....	9,200 00
University Hospital.....	2,180 00
Homœopathic Hospital.....	870 00
All other Departments.....	145,284 00

For alterations and repairs.....

Fuel and lights.....	12,000 00
Current expenses of General Library.....	400 00
Grounds.....	500 00
Postage.....	800 00
Insurance.....	1,500 00
Calendar, Regents' proceedings and miscellaneous printing.....	2,500 00
Current expenses of Museum.....	500 00
Supplies for Chemical Laboratory.....	7,000 00
" " Botanical ".....	400 00
" " Histological ".....	800 00
" " Physiological ".....	800 00
" " Engineering ".....	800 00
" " Microscopical ".....	100 00
" " Physical ".....	500 00
" " Zoölogical ".....	400 00
" " General Chemistry.....	600 00

Current expenses in the Civil Engineering Department..... 400 00

Current expenses in the Astronomical Observatory..... 300 00

For current expenses for anatomical material..... 2,500 00

Advertising Literary Department..... 300 00

 " Medical "..... 200 00

 " Law "..... 200 00

 " Pharmacy "..... 200 00

Transportation of Randolph Rogers Statuary.....	\$4,000 00
Use of water privilege.....	125 00
Purchasing and filling diplomas.....	650 00
Commencement expenses.....	1,200 00
Taxes and improvements on Springwells lots.....	800 00
Purchase of dental supplies.....	2,500 00
Current expenses of University Hospital.....	3,150 00
" " Homœopathic Hospital.....	2,000 00
" " Dental Department.....	1,000 00
Purchase of books for Libraries.....	4,500 00
Apparatus for Natural Philosophy.....	2,062 40
Completion of Scientific Laboratories.....	18,927 19
Chemical vault.....	400 00
Pathological Laboratory.....	500 00
Completion of new boiler house.....	500 00
Completion of Engineering Laboratory.....	1,098 03
Goethe fund.....	200 00
Hygienic Laboratory.....	1,000 00
Miscellaneous expenses.....	2,000 00
Amount of estimated disbursements.....	\$245,639 74
Amount of estimated receipts.....	\$222,750 07
If the Legislature appropriates as heretofore we shall expect to receive for	
expenses of the next fiscal year, for Dental College.....	4,000 00
University Hospital.....	2,500 00
Homœopathic College and Hospital..	3,100 00
Contingent expenses.....	3,125 00
Repairs.....	1,500 00
	238,975 07
Estimated deficit.....	\$8,664 67

TREASURER'S REPORT.

To the Finance Committee, Board of Regents, University of Michigan:

GENTLEMEN—Herewith I submit my financial report from Oct. 1, 1887, to June 30, 1888, in accordance with a law of the last Legislature which requires all State institutions to close annual reports at that date.

Respectfully,

H. SOULE, Treasurer.

RECEIPTS.

Balance in Treasury Oct. 1, 1887.....	\$21,929 09
From State Treasurer, account of current expenses.....	\$62,961 37
" " " " special appropriations.....	54,450 00
" Goethe fund—received from interest on deposit.....	34 42
" Earnings of the University.....	85,619 43
	202,993 22
	\$224,924 31

DISBURSEMENTS.

Paid General Fund Accounts.....	\$125,354 68
" Special " " 	91,342 06— \$216,596 74
Balance in Treasury June 30, 1888.....	8,327 57
	\$224,924 31

UNIVERSITY OF MICHIGAN.

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The following detailed and classified statements exhibit the condition of the several funds:

GENERAL FUND.

RECEIPTS TO THE GENERAL FUND.

From State Treasurer, Acct. 1-30 Mill Tax.....	\$35,454 87	
" " " University Interest.....	27,407 00	
		\$62,861 87
First National Bank of Ann Arbor, Interest.....	\$2,068 85	
University Hospital, Sale of Material.....	827 28	
Homoeopathic Hospital, Sale of Material.....	381 85	
Dental Operating Room, Sale of Material.....	3,504 54	
Anatomical Material sold to Medical Schools.....	417 15	
Miscellaneous Sources.....	1,468 44	
		8,660 56
Students' Fees, Acct, Medical Department.....	\$10,830 00	
" " " Chemical Laboratory.....	9,812 87	
" " " Literary Department.....	22,555 00	
" " " Law Department.....	14,680 00	
" " " Dental Department.....	3,970 00	
" " " Homoeopathic Department.....	1,980 00	
" " " Mechanical Laboratory.....	434 00	
" " " School of Pharmacy.....	3,885 00	
" " " Key Deposits.....	256 00	
" " " Botanical Laboratory.....	228 00	
" " " Physiological Laboratory.....	66 00	
" " " General Chemistry.....	353 00	
" " " Zoölogical Laboratory.....	99 00	
" " " Practical Anatomy.....	3,010 00	
" " " Microscopical Laboratory.....	177 00	
" " " Histological Laboratory.....	878 00	
" " " Pathological Laboratory.....	85 00	
" " " Diploma Fees.....	4,240 00	
		76,988 87
		<u>\$148,510 80</u>
Students' Fees, Total.....	\$76,988 87	
" " Refunded.....	4,753 62	
" " Net.....	\$72,235 25	

DISBURSEMENTS FROM THE GENERAL FUND.

Balance Overdrawn Oct. 1, 1887.....		\$14,879 06
General Pay Roll, Salaries of Officers and Employés.....	\$91,156 00	
Vouchers Paid, Account Students' Fees Refunded.....	4,753 62	
" " " Fuel and Lights.....	8,760 12	
" " " General Library.....	458 14	
" " " Museum.....	119 66	
" " " Advertising Medical Department.....	68 76	
Vouchers paid, Account, Advertising Law Department.....	61 50	
" " " " Pharmacy Department.....	18 00	
" " " Insurance.....	180 00	
" " " Miscellaneous Printing.....	850 42	
" " " Civil Engineering.....	51 00	
" " " Chemical Laboratory.....	6,436 76	
" " " General Chemistry.....	190 08	
" " " Astronomical Observatory.....	23 51	
" " " Histological Laboratory.....	106 20	
" " " Botanical Laboratory.....	423 61	

PUBLIC INSTRUCTION.

Vouchers paid, Account, Physical Laboratory.....	\$26 75	
" " " Physiological Laboratory.....	128 25	
" " " Microscopical Laboratory.....	51 42	
" " " Mechanical Laboratory.....	675 60	
" " " Zoölogical Laboratory.....	880 96	
" " " Dental Operating Room.....	2,894 24	
" " " Anatomical Laboratory.....	4,481 18	
" " " Anatomical Material.....	1,488 64	
" " " Postage.....	688 20	
" " " Pathological Laboratory.....	842 11	
" " " Calendar.....	1,000 00	
		\$125,254 68
Balance in Treasury June 30, 1888.....		8,877 06
		<u>\$148,510 80</u>

SPECIAL FUND ACCOUNTS.

HOMCEOPATHIC MEDICAL COLLEGE.

Receipts.

Balance in Treasury Oct. 1st, 1887.....	\$1,985 42	
From State Treasurer.....	6,000 00	
		<u>\$7,985 42</u>

Disbursements.

Paid salaries of professors and employes.....	\$6,900 00	
Paid vouchers for expenses	158 93	
Balance in Treasury June 30, 1888.....	926 49	
		<u>\$7,985 42</u>

HOMCEPATHIC MEDICAL COLLEGE AND HOSPITAL.

Receipts.

From State Treasurer.....	\$6,200 00	
		<u>\$6,200 00</u>

Disbursements.

Paid salaries of hospital surgeon and employes.....	\$652 50	
Paid vouchers for expenses.....	1,729 57	
Balance in Treasury June 30, 1888.....	3,817 93	
		<u>\$6,200 00</u>

GENERAL LIBRARY.

Receipts.

Balance in Treasury Oct. 1, 1887.....	\$109 78	
From State Treasurer.....	5,000 00	
Balance overdrawn June 30, 1888.....	488 79	
		<u>\$5,548 53</u>

Disbursements.

Paid Vouchers for Expenses.....	\$5,548 52	
		<u>\$5,548 52</u>

UNIVERSITY HOSPITAL.

Receipts.

Balance in Treasury Oct. 1, 1887.....	\$3,124 77	
From State Treasurer.....	2,500 00	
		<u>\$5,624 77</u>

Disbursements.

Salaries of resident physician and employes.....	\$1,580 00	
Paid vouchers for expenses.....	3,468 55	
Balance in Treasury, June 30, 1888.....	686 22	
		<u>\$5,624 77</u>

UNIVERSITY OF MICHIGAN.

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CONTINGENT.

Receipts.

From State Treasurer.....	\$3,250 00	
Balance overdrawn June 30, 1888.....	428 11	
	<hr/>	\$3,678 11

Disbursements.

Balance overdrawn Oct. 1, 1887.....	\$264 12	
Paid vouchers for expenses.....	6,411 99	
	<hr/>	\$6,676 11

REPAIRS.

Receipts.

Balance in Treasury Oct. 1, 1887.....	\$1,836 62	
	<hr/>	\$1,836 62

Disbursements.

Paid vouchers for expenses.....	\$998 18	
Balance in Treasury June 30, 1888.....	838 44	
	<hr/>	\$1,836 62

PHYSIOLOGICAL LABORATORY.

Receipts.

Balance in Treasury, Oct. 1, 1887.....	\$157 12	
	<hr/>	\$157 12

Disbursements.

Paid vouchers for expenses.....	\$4 98	
Balance in Treasury June 30, 1888.....	152 14	
	<hr/>	\$157 12

COLLEGE OF DENTAL SURGERY.

Receipts.

Balance in Treasury Oct. 1, 1887.....	\$3,964 46	
From State Treasurer.....	4,000 00	
	<hr/>	\$7,964 46

Disbursements.

Paid salaries of professors and employes.....	\$6,283 33	
Paid vouchers for expenses.....	1,185 85	
Balance in Treasury, June 30, 1888.....	495 28	
	<hr/>	\$7,964 46

BOILER HOUSE.

Receipts.

Balance in Treasury Oct. 1, 1887.....	\$7,999 36	
Balance overdrawn June 30, 1888.....	5,450 66	
	<hr/>	\$13,390 02

Disbursements.

Paid vouchers for expenses.....	\$13,390 02	\$13,390 02
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ENGINEERING LABORATORY.

Receipts.

From State Treasurer.....	\$6,750 00	\$6,750 00
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Disbursements.

Balance overdrawn Oct. 1, 1887.....	\$958 42	
Paid vouchers for expenses.....	4,770 16	
Balance in Treasury June 30, 1888.....	1,026 42	
	<hr/>	\$6,750 00

PUBLIC INSTRUCTION.

GORTHE FUND.

Receipts.		
Balance in Treasury Oct. 1, 1887.....	\$863 17	
Interest on deposit.....	84 42	
	<u> </u>	<u>\$947 59</u>
Disbursements.		
Paid vouchers for expenses.....	\$259 64	
Balance in Treasury June 30, 1888.....	487 95	
	<u> </u>	<u>\$747 59</u>

DEPARTMENT OF NATURAL PHILOSOPHY.
(PHYSICAL LABORATORY.)

Receipts.		
Balance in Treasury (Physical Lab.) Oct. 1, 1887.....	\$1,954 10	
From State Treasurer.....	1,000 00	
	<u> </u>	<u>\$2,954 10</u>
Disbursements.		
Paid vouchers for expenses.....	\$1,901 70	
Balance in Treasury June 30, 1888.....	1,052 40	
	<u> </u>	<u>\$2,954 10</u>

REMOVAL OF ROGERS' GIFTS.

Receipts.		
Balance overdrawn June 30, 1888.....	\$4 00	\$4 00
	<u> </u>	<u> </u>
Disbursements.		
Balance overdrawn Oct. 1, 1887.....	\$4 00	\$4 00
	<u> </u>	<u> </u>

SCIENTIFIC LABORATORIES.

Receipts.		
Balance in Treasury Oct. 1, 1887.....	\$8,886 20	
From State Treasurer.....	10,000 00	
Balance overdrawn June 30, 1888.....	1,003 20	
	<u> </u>	<u>\$19,889 40</u>
Disbursements.		
Paid vouchers for expenses.....	\$19,889 40	\$19,889 40
	<u> </u>	<u> </u>

CHEMICAL VAULT.

Receipts.		
Balance in Treasury Oct. 1, 1887.....	\$400 00	\$400 00
	<u> </u>	<u> </u>
Disbursements.		
Balance in Treasury June 30, 1888.....	\$400 00	\$400 00
	<u> </u>	<u> </u>

ADDITIONAL SALARIES.

Receipts.		
Balance in Treasury Oct. 1st, 1887.....	\$5,000 00	
From State Treasurer.....	2,500 00	
Balance overdrawn June 30, 1888.....	2,500 00	
	<u> </u>	<u>\$10,000 00</u>
Disbursements.		
Paid pay rolls.....	\$10,000 00	\$10,000 00
	<u> </u>	<u> </u>

FORGE AND FOUNDRY.

Receipts.

Balance in Treasury Oct. 1, 1887.....	\$2,008 74	
From State Treasurer.....	4,250 00	
		<u>\$6,258 74</u>

Disbursements.

Paid vouchers for expenses.....	\$6,258 74	<u>\$6,258 74</u>
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The balances in the Treasury June 30, 1888, are as follows:

SPECIAL FUNDS.

Repairs.....	\$838 44	
Dental College.....	495 28	
University Hospital.....	696 23	
Physiological Laboratory.....	152 14	
Homœopathic College.....	926 49	
Goethe fund.....	487 95	
Natural Philosophy.....	1,052 40	
Chemical vault.....	400 00	
Engineering Laboratory.....	1,026 42	
Homœopathic Medical College and Hospital.....	8,817 93	
		<u>\$9,778 27</u>
Less overdrawn accounts, contingent.....	\$426 11	
" " " General Library.....	428 79	
" " " Removal of Rogers' Gifts.....	4 00	
" " " Boiler house.....	5,450 66	
" " " Scientific Laboratories.....	1,006 20	
" " " Additional salaries.....	2,500 00	
		<u>9,822 76</u>
Special funds overdrawn.....		<u>49 49</u>

GENERAL FUND.

Balance in Treasury June 30, 1888.....	<u>\$8,877 06</u>
Net balance.....	<u>\$8,827 57</u>

APPENDIX B.

EXAMINATIONS FOR DEGREES.

The following examinations were held in 1888:

CANDIDATE FOR THE DEGREE OF DOCTOR OF PHILOSOPHY.

FRED MANVILLE TAYLOR, A. M.

Subjects for Examination: Major—Political Philosophy. Minors—1. History of French Revolution. 2. Political Economy. Thesis—Ethical Basis of the State.

CANDIDATES FOR THE DEGREE OF MASTER OF ARTS.

FRED CONVERSE CLARK, A. B.

Subjects for Examination: Major—Political Economy. Minors—1. German. 2. English Literature. *Thesis*—The Industrial Effects of Railways.

MYRON OSCAR GRAVES, A. B.

Subjects for Examination: Major—Constitutional History of the United States. Minors—1. Constitutional History of England. 2. The Science and Art of Teaching. *Thesis*—The Annexation of Texas.

SUSAN RACHEL HARRISON, A. B.

Subjects for Examination: Major—Greek. Minors—1. Latin. 2. English. *Thesis*—The Didactic Motive in the Æschylean Drama.

MYRA ELIZABETH POLLARD, A. B.

Subjects for Examination: Major—Animal Physiology, with Special Reference to the Physiology of the Vocal Organs. Minors—1. Study of Representative Orators. 2. The Art of Expression. *Thesis*—Physiology of the Voice.

FRED NEWTON SCOTT, A. B.

Subjects for Examination: Major—English Literature. Minors—1. Spanish. 2. Philosophy. *Thesis*—The Beginnings of English Literary Criticism.

CANDIDATES FOR THE DEGREE OF MASTER OF PHILOSOPHY.

HENRIETTA ASH BANCROFT, PH. B.

Subjects for Examination: Major—English Literature. Minors—1. French. 2. Anglo-Saxon. *Thesis*—The American Element in our National Literature.

GERTRUDE HELEN MASON, PH. B.

Subjects for Examination: Major—Anglo-Saxon. Minors—1. Gothic. 2. English Literature (Victorian Period). *Thesis*—The Mythical Episodes in Beowulf.

CANDIDATE FOR THE DEGREE OF MASTER OF SCIENCE.

ELMER SANFORD, B. S.

Subjects for Examination: Major—Animal Physiology. Minors—1. Zoölogy. 2. Organic Chemistry. *Thesis*—Differential Action of Electrical Currents upon the Vasometer System.

UNDERGRADUATES, CANDIDATES FOR BACHELORS' DEGREES
ON THE UNIVERSITY SYSTEM.

BACHELOR OF ARTS.

CHARLES HENRY CUSHING.

Subjects for Examination: Major—The Science and Art of Teaching. Minors—1. Philosophy. 2. Modern Languages.

ELMER ELLSWORTH HUBBARD.

Subjects for Examination: Major—Sanitary Science. Minors—1. English Literature. 2. Philosophy.

PRESTON MANASSEH HICKEY.

Subjects for Examination: Major—Greek. Minors—1. English. 2. Sanscrit.

LUCIAN H. E. LOWREY.

Subjects for Examination: Major—History. Minors—1. English Literature. 2. Philosophy.

MARTHA PRENTICE MERWIN.

Subjects for Examination: Major—Greek. Minors—1. Latin. 2. Philosophy.

JOHN HAVARD POWELL.

Subjects for Examination: Major—Constitutional History of the United States. Minors—1. English Literature. 2. Philosophy.

BACHELOR OF PHILOSOPHY.

ROSETTER GLEASON COLE.

Subjects for Examination: Major—Music. Minors—1. Physics of Music. 2. English Literature.

BACHELOR OF LETTERS.

ALEXANDER CAMPBELL KISKADDEN.

Subjects for Examination: Major—History. Minors—1. Political Economy. 2. English Literature.

HENRY KIRK WHITE.

Subjects for Examination: Major—History. Minors—1. English Literature. 2. Political Science.

FRANK ELMER CONVERSE.

Subjects for Examination: Major—History. Minors—1. English. 2. Political Science.

PUBLIC INSTRUCTION.

JAMES NATHAN MCBRIDE.

Subjects for Examination: Major—Political Economy. Minors—1. Constitutional History of the United States. 2. English Literature.

CLAYTON ALBERT READ.

Subjects for Examination: Major—History. Minors—1. English Literature. 2. Modern Languages.

MORITZ ROSENTHAL.

Subjects for Examination: Major—History. Minors—1. Political Economy. 2. English Literature.

STATE BOARD OF EDUCATION.

ANNUAL REPORT.

To the Superintendent of Public Instruction:

SIR—In conformity with the provisions of law, the following report is submitted by the State Board of Education for the year ending June 30, 1888:

STATE NORMAL SCHOOL.

Under the very able management of Principal Sill and the Faculty, the school has continued to prosper. Both in the matter of attendance and in the character of the work done the record has been satisfactory, while the character of the students attending the school still maintains the high standing in this regard for which the school has become noted, and which speaks so well for the homes of Michigan, from which nearly all our students come.

The law has left the question of fees in the hands of the Board, and we have concluded to apply a portion of the nominal admission fee charged to furnishing students with the text-books used, and thus in some slight degree lessen the burden of securing their education to many deserving young people, who will prove themselves of great worth to the State as teachers, but who are unable to bear the entire burden of obtaining an education alone. Some States, like New York, go so far as to encourage young people to fit themselves for teaching by attending the normal schools of the State, as to furnish transportation. We do not recommend this for our pupils, but we are desirous of placing within their reach every reasonable facility which will aid them in becoming good teachers. We have also added a kindergarten department to the school.

For all statistical matter we refer you to the reports of the Principal and Treasurer, hereto annexed.

The changes in the membership of the faculty during the past year have been as follows: The resignation of Miss Helen M. Post, for seventeen years an instructor in the institution, took place June 27, 1888; Mr. W. P. Bowen was appointed instructor in mathematics, Miss Ella M. Hayes as instructor in history, Miss Amelia Hale as instructor in mathematics, Mr. George Key as assistant in mathematics, Mr. C. D. McLouth as instructor in natural sciences, and Miss Nina Vanderwalker as critic and kindergarten teacher. The present corps of instructors will be found in the accompanying report of the Principal.

The special appropriation of \$60,000 made by the last legislature has been expended as provided by the act. The buildings contemplated have been erected and are now in use. The increased facilities for work furnished by

these new buildings greatly increase the efficiency and usefulness of the institution.

The school is now furnished with one of the best heating plants in the State, and all its appliances are so complete as to render it reasonably safe to predict that we have nearly, if not quite, reached the maximum of expenditure in supporting it. With the employment of additional teachers, as the growth of the school shall demand, no extra demands will be required for some years.

The report of the Principal, given herewith, furnishes a very comprehensive review of the work of the school for the year.

VISITORS.

According to the provisions of law, the following visitors have been appointed to the Normal School for the years 1887 and 1888: Hon. Isaac Marston of Detroit, Rev. Jas. L. Patton of Greenville, and Mrs. M. E. C. Bates of Traverse City.

STATE CERTIFICATES.

Below is a complete list of State certificates that have been granted in accordance with the provisions of Act No. 231, Public Acts of 1879:

Upon Invitation.

1880.	1883.
Varnum B. Cochran, Marquette.	J. G. Plowman, White Pigeon.
Miss Julia A. King, Ypsilanti.	David Howell, Lansing.
Mrs. L. F. Selfridge, Jackson.	J. S. Crombie, Big Rapids.
E. P. Church, Greenville.	Frank Landon, Niles.
C. B. Thomas, Saginaw.	
1882.	1884.
H. R. Pattengill, Ithaca.	E. C. Thompson, Albion.
J. W. Robinson, Manchester.	R. W. Putnam, Ypsilanti.
E. B. Fairfield, Jr., Grand Haven.	Mrs. S. A. Crane, Houghton.
M. Louise Jones, Charlotte.	F. A. Barbour, Coldwater.
Lena Schenck, Fenton.	
H. R. Gass, Jonesville.	1885.
M. T. Gass, Flint.	Geo. S. White, Jackson.
Chas. Kelsey, Marquette.	J. W. Simmons, Dowagiac.
Z. C. Spencer, Battle Creek.	Mrs. Cora D. Martin, Paw Paw.
	Miss Eliza Benton, East Saginaw.
	Miss Nettie Dally, Lake Linden.
	James H. Hopkins, Ypsilanti.
1886.	1888.
Mrs. Carrie H. Stanley, Kalamazoo.	J. N. McCall, Ithaca.
E. M. Russell, Paw Paw.	Chas. F. Adams, Detroit.
L. C. Hull, Detroit.	Miss Martha Goodwin, Olivet.
H. M. Slauson, Houghton.	Miss Jennie Sherzer, Ann Arbor.
Miss Fanny Gray, Ypsilanti.	
Miss Mary Bassett, Allegan.	Miss Nina Vanderwalker, Ypsilanti.
1887.	James H. Warnock, Spring Lake.
Wesley Sears, Coldwater.	

Upon Examination.

1880.	William E. Tripp, Weston.
James Warnock, Jr., Spring Lake.	John Evert, Moorepark.
James A. Smith, Ewart.	T. Dorland Brown, Port Austin.
W. W. French, McMillan.	Mrs. T. Dorland Brown, Port Austin.
1881.	Mrs. Elizabeth W. Gallup, Milford.
L. O. Chatfield, Mt. Pleasant.	J. W. Humphrey, Wayland.
C. C. Wood, Wacousta.	Miss Marcia Hall, Otsego.
C. E. Swift, Lexington.	Miss Abbie Barker, Paw Paw.
W. A. Fallas, Cedar Springs.	A. H. Bennett, Bangor.
James Brassington, Hart.	William H. Munson, Centreville.
1882.	Frank H. Farnum, Gaylord.
E. J. Wiley, Sault Ste. Marie.	Albert P. Cook, Milford.
Frank Millis, Almont.	Eugene H. Hinckley, Lawton.
G. J. Edgcumbe, Deerfield.	Frank A. Hamlin, Blaine.
J. G. Johnston, Three Oaks.	Vesta G. Lanning, Bancroft.
1883.	Chas. O. Hoyt, Grass Lake.
E. A. Condit, Morenci.	1888.
1884.	J. E. Farnum, Fenton.
W. J. Cox, Calumet.	Eugene Gregory, Sturgis.
1885.	Frank E. Burkhead, Hartford.
Wayne Simmons, Augusta.	W. P. Rankin, Leslie.
1886.	J. O'Leary, Breedsville.
Fred Glafke, Mendon.	J. K. Osgerby, Marlette.
Abram Knechtel, St. Charles.	

LIBRARY BOOKS.

The contract for furnishing books to the township and district libraries of the State has been awarded to John McFarlane of Detroit, he being the lowest bidder. The list of books selected by the Board is given in the accompanying schedules.

APPROPRIATIONS.

There will be required during each of the next two years the following sums of money:

Salaries of teachers.....	\$85,250 00
Salaries of other employés.....	4,100 00
Fuel.....	2,500 00
Supplies.....	1,500 00
Contingent.....	800 00
Library.....	2,000 00
Science department.....	600 00
Training school.....	200 00
Lights.....	250 00
Furniture.....	600 00

PUBLIC INSTRUCTION.

Repairs.....	\$1,000 00	
Printing.....	450 00	
Postage, freight and express.....	150 00	
Visiting committee.....	100 00	
Advertising.....	100 00	
Insurance.....	1,000 00	
Kindergarten.....	250 00	
Commencement expenses.....	200 00	
		<hr/> \$51,075 00

ESTIMATED RECEIPTS.

Admission fees.....	\$3,500 00	
Normal School interest.....	4,200 00	
Diploma fees.....	250 00	
Laboratory fees.....	150 00	
		<hr/> 8,100 00
Leaving to be appropriated by the Legislature for each of the years 1889 and 1890.....		<hr/> \$42,975 00

CONCLUSION.

The period embraced in this report has been one of special prosperity, marked with great unanimity of views and harmony of action on the part of the Board of Education, in the expenditure of the money appropriated for an enlargement of the facilities which the increasing numbers and growing wants of the Normal School imperatively demand. It has been our aim in connection with the principal and teachers, to make prominent the one distinguishing feature of the institution—the preparation of teachers for the public schools—while the eminent success of graduates now in the field, and the great and steadily increasing demand for teachers in all grades of school work fully demonstrate the wisdom of the founders of the institution and of those whose earnest toil has made it what it is.

Very respectfully,

BELA W. JENKS,
JAMES M. BALLOU,
SAMUEL S. BABCOCK,
JOSEPH ESTABROOK,
State Board of Education.

APPENDIX A.

LIST OF MEMBERS OF THE FACULTY, WITH SALARY PAID EACH.

Name.	Salary.
John M. B. Sill	\$3,500
Daniel Putnam	2,500
Julia A. King	1,500
Frederic H. Pease	2,000
Charles Fitz Roy Bellows	2,000
August Lodeman	2,000
Austin George	2,000
Lucy A. Osband	1,000
Edwin A. Strong	2,000
Florus A. Barbour	2,000
John Goodison	2,000
Benjamin L. D'Ooge	2,000
Helen M. Post	800
William H. Brooks	800
Lois A. McMahon	800
Annie A. Paton	800
Abbie Pearce	800
Charles E. St. John	800
Willis A. Weeks	800
George F. Key	800
Amelia Hale	400
Wilbur P. Bowen	400
Ella Hayes	400
Hiram W. Miller	400
Clarence D. McLouth	400
P. R. Cleary	250
Florence Goodison	500
Warren H. Smith	600

LIST OF BOOKS FOR TOWNSHIP AND DISTRICT LIBRARIES.

[illegible]

LIST OF BOOKS.—Continued.

Books.	No. Vols.	Cata- logue Price.	Price Bld.
HISTORY AND BIOGRAPHY.			
<i>Famous Women:</i>			
George Elliot.....	1	\$1 00 per vol.	\$0 64 per vol.
Madame Roland.....	1		
Elizabeth Fry.....	1		
Emily Brontë.....	1		
Margaret Fuller.....	1		
Mary Lamb.....	1		
Maria Edgeworth.....	1		
Harriet Martineau.....	1		
Rachel.....	1		
Freeman's Old English History.....	1	\$1 50	\$0 80
Froude's Caesar.....	1	75	40
Gardiner's English History for Young Folks.....	1	1 00	60
Green's Shorter History of the English People.....	1	1 20	99
Green's The Making of England.....	1	2 50	1 65
Hale's Boys' Heroes.....	1	1 00	65
Harrison's Young Folks' History of Spain.....	1	1 50	75
Harrison's Young Folks' History of India.....	1	1 50	75
Harrison's Young Folks' History of Switzerland.....	1	1 50	75
Higginson's Young Folks' Book of American Explorers.....	1	1 50	95
Higginson's Young Folks' United States.....	1	1 50	1 05
Hildreth's History of the United States.....	6	12 00	7 50
Hinsdale, Old Northwest.....	1	2 50	1 65
Hawthorne's True Stories from History and Biography.....	1	1 00	64
Hawthorne, Life of.....	1	1 00	75
Holland and its People.....	1	2 00	1 80
Irving's Life of Columbus (Popular Edition).....	1	1 50	80
Irving's Life of Washington (School Edition).....	1	2 00	85
Jameson's Celebrated Female Sovereigns.....	1	75	29
Johnson's The Old French War.....	1	1 25	55
Johnson's War of 1812.....	1	1 25	55
Keary's The Dawn of History.....	1	1 25	82
Koestlin's Martin Luther.....	1	1 00	50
Ladd's History of War with Mexico.....	1	1 25	55
Lamartine's Oliver Cromwell.....	1	60	39
Leland's Lincoln (New Plutarch Series).....	1	1 00	45
Life of Mary Somerville.....	1	1 50	95
Life of Anna Jameson.....	1	2 50	1 62
Life of Charlotte Brontë.....	1	1 00	66
Life of Caroline Herschell.....	1	1 75	1 17
Life of Dorothy Pattison (Sister Dora).....	1	1 25	82
Lockhart's Life of Scott.....	2	2 50	1 60
Lodge's English Colonies in America.....	1	3 00	1 90
Macaulay's History of England.....	5	3 75	1 40
McCarthy's History of Our Own Times.....	2	3 00	1 15
MacKenzie's History of the Nineteenth Century.....	1	1 00	67
Markham's Colonial Days.....	1	2 50	1 15
Markham's Narrative History of King Philip's War.....	1	1 25	55
Motley's Dutch Republic.....	3	6 00	3 90
Motley's Netherlands.....	4	8 00	5 00
Muller's Political History of Modern Times.....	1	3 00	1 98
Outlines of the History of France.....	1	2 50	1 66
Parkman's Conspiracy of Pontiac.....	2	5 00	3 30
Parkman's Jesuits in North America.....	1	2 50	1 65
Parkman's LaSalle and the Great West.....	1	2 50	1 65
Plutarch's Lives (Langhorne).....	3	5 00	1 75
Prescott's Conquest of Peru.....	2	3 00	1 95
Prescott's Conquest of Mexico.....	3	4 50	2 90
Prescott's Charles V.....	3	4 50	2 90
Purdie's Episodes of French History.....	1	1 50	96
Schiller and his Times.....	1	2 00	1 30
Self-Made Men (Seymour).....	1	1 75	1 05
Smiles's Lives of the Stevensons.....	1	3 00	1 82
Smiles's Life of a Scotch Naturalist.....	1	1 50	92
Spark's American Biography.....	10	12 50	8 00
Stedman's Poets of America.....	1	2 25	1 48
Strickland's Stories from History.....	1	75	29
Strickland's Stories from Ancient History.....	1	75	29
Strickland's Stories from Modern History.....	1	75	29
Strickland's Stories from English History.....	1	75	29
Strickland's Queens of England.....	1	1 25	1 00
Student's History of Greece.....	1	1 25	1 00
Student's Merivale's Rome.....	1	1 25	1 00
Student's History of France.....	1	1 25	1 00
Student's History of Germany.....	1	1 50	1 20

LIST OF BOOKS.—Continued.

Books.	No. Vols.	Cata- logue Price.	Price Bld.
TRAVELS, DISCOVERIES, ETC.			
Rollo's Tour in Europe	10	\$10 00	\$4 00
Stanley's Through the Dark Continent.....	2	10 00	6 00
Stanley's Sinal and Palestine.....	1	2 50	1 65
Symond's Italian By-ways	1	1 75	1 17
Thackeray's Irish Sketch Book }	1	1 25	75
Thackeray's Paris Sketch Book }			
The Land of the Midnight Sun.....	2	7 50	4 90
Three Vassar Girls in France.....	1	2 00	1 15
Three Vassar Girls at Home	1	2 00	1 15
Three Vassar Girls on the Rhine.....	1	2 00	1 15
Three Vassar Girls in Italy.....	1	2 00	1 15
Three Vassar Girls in South America.....	1	2 00	1 15
Three Vassar Girls in England.....	1	2 00	1 15
Three Vassar Girls Abroad.....	1	2 00	1 15
Trafton's An American Girl Abroad.....	1	1 50	98
Vincent's Land of the White Elephant.....	1	2 50	1 65
Vincent's Through and Through the Tropics.....	1	1 50	97
Warner's In the Levant.....	1	2 00	1 80
Warner's My Winter on the Nile.....	1	2 00	1 80
Wallace's Malay Archipelago.....	1	2 50	1 25
Waterton's Wanderings in South America.....	1	1 75	1 17
What Mr. Darwin Saw, etc.....	1	3 00	1 95
SCIENCES, POLITICS, ETC.			
Abbott's Science for the Young.....	4	6 00	3 60
Agassiz's Methods of Study in Natural History.....	1	1 50	98
Agassiz's Geological Sketches.....	2	3 00	1 95
Agassiz's Seaside Studies.....	1	3 00	1 95
A World of Wonders	1	2 00	1 25
Buckley's Fairy Land of Science.....	1	1 50	98
Buckley's Life and Her Children.....	1	1 50	98
Buckley's Winners in Life's Race.....	1	1 50	98
Faraday's Chemical History of a Candle.....	1	85	56
Faraday's Physical Forces	1	1 00	50
Ingersoll's Friends Worth Knowing.....	1	1 00	65
Johnson's American Politics.....	1	1 00	73
Miller's Bird Ways	1	1 25	80
Naturalist's Voyage Round the World.....	1	2 00	1 81
Newcomb's Popular Astronomy (Fifth Edition).....	1	2 50	1 60
Nordhoff's Politics for Young Americans.....	1	88	62
Pitman's Alcohol and the State.....	1	1 50	95
Proctor's Half-Hours With the Telescope.....	1	1 25	80
Schele de Ver's Wonders of the Deep.....	1	1 25	88
Science Primers:			
Physics—Balfour Stewart.....	1	50	88
Physical Geography—Geike.....	1	50	88
Physiology—M. Foster.....	1	50	88
Astronomy—J. N. Lockyear.....	1	50	88
Geology—Geike.....	1	50	88
Political Economy—Jevons.....	1	50	88
Sumner's History of Protection in United States.....	1	75	48
Tausig's Protection to Young Industries.....	1	75	48
Treat's Home Studies in Nature.....	1	90	74
Tyndall's Fragments of Science.....	1	2 50	1 65
FICTION.			
Aldrich's Prudence Palfrey.....	1	1 50	98
Aldrich's Stillwater Tragedy.....	1	1 50	98
Anderson's The Improvisatore.....	1	1 00	65
Arabian Nights	1	75	29
Auerbach's Edelweiss	1	1 00	66
Auerbach's On the Heights.....	2	2 00	1 80
Blackmore's Lorna Doone.....	1	1 00	65
Bjornsen's Happy Boy.....	1	1 00	65
Brontë's Jane Eyre (Home Edition).....	1	75	80
Brontë's Shirley.....	1	1 25	60
Brontë's Villette.....	1	1 25	60
Brontë's Professor.....	1	1 25	60
Bulwer's Kenelm Chillingly (Home Edition).....	1	75	80
Bulwer's The Last of the Barons.....	1	1 25	62
Bulwer's Last Days of Pompeii.....	1	75	29

LIST OF BOOKS.—Continued.

Books.	No. Vols.	Cata- logue Price.	Price Bid.
FICTION.			
Cable's Old Creole Days.....	1	\$1 25	90 82
Cable's The Grandissimes.....	1	1 25	82
Charles's Joan the Maid.....	1	1 00	50
Charles's Victory of the Vanquished.....	1	1 00	50
Cooper's Leather-Stocking Tales.....	1	2 00	83
Craddock's In the Tennessee Mountains.....	1	1 25	84
Craddock's Prophet of the Great Smoky Mountains.....	1	1 25	84
Dickens's Works, Complete (Pollard's Edition).....	15	12 50	5 00
Dr. J. G. Holland's Sevenoaks.....	1	1 25	82
Dr. J. G. Holland's Nicholas Minturn.....	1	1 25	82
Dr. J. G. Holland's Arthur Bonnicastle.....	1	1 25	82
Eber's Egyptian Princess.....	2	1 50	1 00
Eber's Emperor.....	2	1 50	1 00
Eber's Serapis.....	1	90	50
Eber's Uarda.....	2	1 50	1 00
E. P. Roe's From Jest to Earnest.....	1	1 50	90
E. P. Roe's Opening of a Chestnut Burr.....	1	1 50	90
E. P. Roe's Barriers Burned Away.....	1	1 50	90
George Eliot's Adam Bede.....	1	75	29
George Eliot's Daniel Deronda.....	1	1 25	40
George Eliot's Felix Holt.....	1	75	29
George Eliot's Middlemarch.....	1	1 25	40
George Eliot's Mill on the Floss.....	1	75	29
George Eliot's Romola.....	1	75	29
George Eliot's Scenes of Clerical Life.....	1	1 00	45
George Eliot's Silas Marner.....	1	75	30
Goldsmith's "Vicar of Wakefield," (Home Edition).....	1	75	30
Hale's Ten Times One is Ten.....	1	1 00	65
Hawthorne's Marble Faun.....	1	2 00	1 30
Hawthorne's House of Seven Gables.....	1	2 00	1 30
Hawthorne's Mosses from An Old Manse.....	1	2 00	1 30
Hawthorne's Twice Told Tales.....	1	2 00	1 30
Holmes's A Mortal Antipathy.....	1	1 50	96
Holmes's Elsie Venner.....	1	2 00	1 30
Holmes's Guardian Angel.....	1	2 00	1 30
Howard's Aulnay Tower.....	1	1 50	96
Howell's Foregone Conclusion.....	1	1 50	96
Howell's Chance Acquaintance.....	1	1 50	96
Howell's Lady of the Aroostook.....	1	1 50	96
Howell's Undiscovered Country.....	1	1 50	96
Hughes's Tom Brown at Oxford (Home Edition).....	1	75	30
Hugo's Toilers of the Sea.....	1	1 50	90
James's The American.....	1	2 00	1 25
Jane Porter's Scottish Chiefs.....	1	75	29
Jane Porter's Thaddeus of Warsaw.....	1	75	29
Jean Ingelow's Off the Skelligs.....	1	1 00	65
Kingsley's Alton Locke.....	1	1 00	65
Kingsley's Hereward.....	1	1 00	65
Kingsley's Hypatia.....	1	1 00	65
Kingsley's Westward Ho.....	1	1 00	65
Longfellow's Hyperion.....	1	40	27
MacDonald's Sir Gibbie.....	1	1 00	65
MacDonald's Robert Falconer.....	1	1 50	82
MacDonald's David Elginbrod.....	1	1 50	82
MacDonald's Seaboard Parish.....	1	1 50	82
MacDonald's Annals of a Quiet Neighborhood.....	1	1 50	82
Mark Twain's Prince and Pauper.....	1	3 00	1 50
Miss Alcott's Little Women.....	1	1 50	95
Miss Alcott's Little Men.....	1	1 50	95
Miss Alcott's An Old Fashioned Girl.....	1	1 50	95
Miss Howard's One Summer.....	1	1 25	82
Miss Mulock's Woman's Kingdom.....	1	90	50
Miss Mulock's John Halifax, Gentleman (Alta Edition).....	1	90	30
Mrs. Alexander's Which Shall It Be.....	1	1 00	65
Mrs. Burnett's Fair Barbarian.....	1	1 25	82
Mrs. Burnett's That Lass 'o Lowrie's.....	1	1 50	82
Mrs. Charles's Schonberg Cotta Family.....	1	1 00	45
Mrs. Charles's Kittle Trevelyan.....	1	1 00	45
Mrs. Whitney's Leslie Goldthwaite.....	1	1 50	96
Mrs. Whitney's Sights and Insights.....	2	3 00	1 98
Mrs. Whitney's We Girls.....	1	1 50	96
Mrs. Whitney's Other Girls.....	1	1 50	96
Mrs. Whitney's Real Folks.....	1	1 50	96
Mrs. Woolson's Anne.....	1	1 25	82
Rasselas.....	1	1 00	25
Ring's Milton and His Times.....	1	1 00	65

LIST OF BOOKS.—Continued.

Books.	No. Vols.	Cata- logue Price.	Price Bld.
FICITION.			
Robinson Crusoe.....	1	\$1 00	\$0 29
Saintine's Picciola.....	1	1 00	60
St. Pierre's Paul and Virginia (Home Edition).....	1	75	80
Saxe Holm Stories.....	2	2 00	1 80
Scott's Ivanhoe.....	1	75	29
Scott's Kenilworth.....	1	1 00	85
Scott's Old Mortality.....	1	1 00	85
Scott's Guy Mannering.....	1	75	29
Scott's Antiquary.....	1	1 00	85
Scott's Rob Roy (Home Edition).....	1	75	80
Stowe's Agnes of Sorento.....	1	1 50	98
Stowe's Oldtown Folks.....	1	1 50	98
Thackeray's Vanity Fair (Home Edition).....	1	75	80
Thackeray's Newcomes.....	1	1 25	60
Thackeray's Virginians.....	1	1 25	60
Thackeray's Pendennis.....	1	1 25	60
Tom Brown of Rugby.....	1	75	29
Toussie's Fool's Errand.....	1	1 50	90
Uncle Tom's Cabin (New Edition).....	1	1 00	60
Undine and Other Tales.....	1	1 00	65
Victor Hugo's Les Miserables.....	1	1 50	80
Wallace's The Fair God.....	1	1 50	98
Warren's Ten Thousand a Year.....	1	1 50	75
Whitney's Bonnyborough.....	1	1 50	98
Wm. Black's Daughter of Heth (Belford Edition).....	1	1 00	55
Wm. Black's Princess of Thule (Belford Edition).....	1	1 00	55
Yonge's Heir of Redcliffe.....	1	1 25	82
POETRY AND THE DRAMA.			
Bryant's Poetical Works (Appleton Edition).....	1	1 00	67
Dryden's Poetical Works (Globe Edition).....	1	1 25	70
Goldsmith's Select Poems (Rolfe).....	1	70	40
Longfellow's Poetical Works (Cabinet Edition).....	1	1 00	67
Milton's Poetical Works.....	1	1 25	70
Scott's Poetical Works.....	1	1 25	50
Shakespeare's Select Plays (Rolfe).....	40	22 40	18 40
Tennysons Poetical Works.....	1	1 50	60
Ward's English Poets (Student's Edition).....	4	4 00	3 50
Whittier's Poetical Works (Cabinet Edition).....	1	1 00	67
Whittier's Child Life.....	1	2 00	1 80
Wordsworth's Select Poems (Arnold).....	1	1 25	70
Alice & Phoebe Cary.....	1	1 75	1 17
MISCELLANEOUS.			
Adams's Handbook of American Authors.....	1	75	49
Adams's Handbook of English Authors.....	1	75	49
Aesop's Fables (Routledge's Ed.).....	1	1 00	45
Alice's Adventures in Wonderland.....	1	1 00	65
<i>Ancient Classics for English Readers :</i>			
Cicero.....	1	50	35
Horace.....	1	50	85
Vergil.....	1	50	35
Homer.....	2	1 00	70
Plato.....	1	50	35
Xenophon.....	1	50	35
Bacon's Essays.....	1	1 00	45
Ballou's Pearls of Thought.....	1	1 25	82
Benjamin's Contemporary Art.....	1	8 50	2 20
Bunyan's Pilgrim's Progress.....	1	75	29
Carey's Pictures of Country Life.....	1	1 50	97
Carleton's Popular Quotations and Mythology.....	1	1 00	67
Cary's Cloverbook.....	1	1 25	75
Chambers's Book of Days.....	2	8 00	4 75
Chambers's Miscellany.....	10	7 50	4 50
Childhood (Little Classics).....	1	1 00	65
Church's Stories from Vergil.....	1	1 50	70
Church's Stories from the Greek Tragedians.....	1	1 50	70
Church's Stories from Homer.....	1	1 50	70
Dowden's Shakespeare, his Mind and Art.....	1	1 75	1 10
Emerson's Conduct of Life.....	1	1 25	84
Emerson's English Traits.....	1	1 25	84
Emerson's Representative Men.....	1	1 25	84
Erckmann-Chatrain's Conscript of 1813.....	1	1 25	80

LIST OF BOOKS.—Continued.

Books.	No. Vol.	Cata- logue Price.	Price Bid.
MISCELLANEOUS.			
t.....	1	\$2 00	\$1 29
ains and Wife.....	1	2 00	1 30
.....	1	1 25	1 30
.....	1	2 00	1 30
.....	1	1 50	75
.....	1	2 00	1 29
.....	1	75	29
.....	1	75	29
.....	1	2 00	1 30
nd Tales.....	1	1 00	65
Stories.....	1	1 00	65
.....	1	1 50	75
.....	1	1 00	65
.....	1	1 00	65
.....	1	1 00	65
.....	1	2 00	1 30
Table.....	1	2 00	1 30
Table.....	1	2 00	1 30
.....	1	65	55
.....	1	60	38
.....	1	60	38
.....	1	60	38
.....	1	60	38
.....	1	60	38
.....	1	1 00	65
.....	1	1 00	65
.....	1	1 00	65
.....	1	1 00	65
.....	1	1 00	65
.....	1	1 00	65
.....	1	75	30
Abbey.....	1	1 00	65
.....	1	1 50	98
.....	1	1 00	80
.....	1	1 50	98
.....	2	4 00	3 00
.....	1	2 00	1 30
.....	1	1 50	98
.....	3	3 50	2 00
.....	1	1 00	60
nda.....	1	1 00	60
.....	1	1 25	83
.....	1	1 25	83
.....	1	1 00	60
.....	1	1 00	65
.....	2	3 00	1 96
.....	1	1 25	41
.....	1	1 00	65
.....	1	1 50	98
ng.....	1	3 00	1 98
etry.....	1	1 00	65
.....	1	1 00	65
.....	1	25	18
.....	1	75	30
orld.....	1	1 50	80
orld.....	1	1 50	80
.....	1	1 00	60
.....	1	1 00	60
.....	1	1 00	60
.....	1	1 25	75
.....	1	75	29
.....	1	2 00	1 00
.....	1	2 50	1 30
.....	1	1 25	70
.....	1	3 00	1 90
.....	1	1 50	98
.....	1	1 25	68

SUPPLEMENTAL LIST OF BOOKS.

Books.	No. Vols.	Cata- logue Price.	Price Bld.
HISTORY AND BIOGRAPHY.			
<i>American Statesmen Series:</i>			
John Quincy Adams, by John T. Morse, Jr.	1	\$1 25 per volume.	\$0 82 per volume.
Alexander Hamilton, by Henry Cabot Lodge	1		
John C. Calhoun, by H. von Holst	1		
Andrew Jackson, by W. G. Sumner	1		
John Randolph, by Henry Adams	1		
James Monroe, by D. C. Gilman	1		
Thomas Jefferson, by John T. Morse, Jr.	1		
Daniel Webster, by Henry Cabot Lodge	1		
Albert Gallatin, by John Austin Stevens	1		
James Madison, by Sydney Howard Gay	1		
John Adams, by John T. Morse, Jr.	1		
John Marshall, by Allan B. Magruder	1		
Samuel Adams, by James K. Hosmer	1		
Thomas H. Benton, by Theodore Roosevelt	1		
Henry Clay, by Carl Schurz	2		
Patrick Henry, by Moses Colt Tyler	1		
Martin Van Buren, by Edward M. Shepard	1		
George Washington, by H. C. Lodge	2		
Gouverneur Morris, by Theodore Roosevelt	1		
<i>American Commonwealths:</i>			
Virginia	1	\$1 25 per volume.	\$0 82 per volume.
Oregon	1		
Maryland	1		
Kentucky	1		
Michigan	1		
Kansas	1		
California	1		
New York	2		
Connecticut	1		
Tennessee	1		
Missouri	1		
Ohio	1		
Pennsylvania	1		
New Jersey	1		
<i>American Men of Letters:</i>			
Washington Irving	1	\$1 25 per volume.	\$0 82 per volume.
Noah Webster	1		
Henry D. Thoreau	1		
George Ripley	1		
J. Fennimore Cooper	1		
Margaret Fuller Osseoli	1		
Ralph Waldo Emerson	1		
Edgar Allan Poe	1		
Nathaniel Parker Willis	1		
Benjamin Franklin	1		
William Cullen Bryant	1		
Bayard Taylor	1		
William Gilmore Sims	1		
Bryce's, The American Commonwealth	2	6 00	5 00
<i>The Story of the Nations:</i>			
Greece	1	\$1 50 per volume.	\$0 98 per volume.
Rome	1		
The Jews	1		
Chaldea	1		
Norway	1		
Germany	1		
Spain	1		
Hungary	1		
Carthage	1		
The Moors in Spain	1		
The Saracens	1		
The Normans	1		
Persia	1		
Ancient Egypt	1		
Alexander's Empire	1		
Assyria	1		
Ireland	1		
Goths	1		
Holland	1		
Turkey	1		
Media, Babylon and Persia	1		
Medieval France	1		

LIST OF BOOKS.—Continued.

Books.	No. Vols.	Cata- logue Price.	Price Bld.
HISTORY AND BIOGRAPHY.			
<i>Memoirs:</i>			
Gen. W. T. Sherman.....	2	\$5 00	\$3 20
Gen. U. S. Grant.....	2	7 50	4 75
Gen. Geo. B. McClellan (own story).....	1	3 75	2 50
Coffin, Old Times Colonies.....	1	\$3 per vol.	\$1.05 per vol.
Drum Beat Nation.....	1		
Marching to Victory.....	1		
<i>Harper's Young People Series:</i>	1	\$1.00 per volume.	\$0.65 per volume.
The Adventures of Jimmy Brown. Edited by W. L. Alden.....	1		
The Cruise of the Canoe Club. By W. L. Alden.....	1		
The Cruise of the "Ghost." By W. L. Alden.....	1		
The Moral Pirates. By W. L. Alden.....	1		
Toby Tyler; or, Ten Weeks with a Circus. By James Otis.....	1		
Mr. Stubbs's Brother. A Sequel to "Toby Tyler." By James Otis.....	1		
Tim and Tip; or, The Adventures of a Boy and a Dog. By James Otis.....	1		
Left Behind; or, Ten Days a Newsboy. By James Otis.....	1		
Raising the "Pearl." By James Otis.....	1		
Mildred's Bargain, and Other Stories. By Lucy C. Lillie.....	1		
Nan. By Lucy C. Lillie.....	1		
The Four Macnicols. By William Black.....	1		
The Lost City; or, The Boy Explorers in Central Asia. By David Ker.....	1		
The Talking Leaves. An Indian Story. By W. O. Stoddard.....	1		
Two Arrows. By W. O. Stoddard.....	1		
Who was Paul Grayson? By John Habberton.....	1		
Prince Lazybones, and Other Stories. By Mrs. W. J. Hays.....	1		
The Ice Queen. By Ernest Ingersoll.....	1		
Strange Stories from History. By G. C. Eggleston.....	1		
Music and Musicians. By Lucy C. Lillie.....	1		
Wakulla. A Story of Florida. By C. K. Munroe.....	1		
Rolf House. By Lucy C. Lillie.....	1		
Silent Pete. By James Otis.....	1		
Jo's Opportunity. By Lucy C. Lillie.....	1		
Into Unknown Seas. By David Ker.....	1		
The Flamingo Feather. By C. K. Munroe.....	1		
A New Robinson Crusoe. By W. L. Alden.....	1		
The Colonel's Money. By Lucy C. Lillie.....	1		
Derrick Sterling. By C. K. Munroe.....	1		
<i>Count Tolstoi's Works:</i>			
Anna Karénina.....	1	\$1 75	\$1 15
Childhood, Boyhood and Youth.....	1	1 50	98
Ivan Ilyitch.....	1	1 25	88
My Religion.....	1	1 00	68
My Confession.....	1	1 00	68
What to do?.....	1	1 25	88
The Invaders.....	1	1 25	88
A Russian Proprietor.....	1	1 50	88
Napoleon's Russian Campaign.....	1	1 50	88
The Long Exile.....	1	1 50	88
Life.....	1	1 50	88
Sevastopol.....	1	1 00	68
The Cossacks.....	1	1 75	88
Power and Liberty.....	1	75	58
TRAVELS AND DISCOVERIES.			
Froude, The English in the West Indies.....	1	\$1.75 per vol.	\$1.15 per vol.
Field, Gibraltar.....	1		
Wilson, China.....	1		
<i>Boy Travellers—Knox Series.</i>			
Japan and China.....	1	\$3.00 per vol.	\$1.05 per vol.
Slam and Java.....	1		
Ceylon and India.....	1		
Egypt and Holy Land.....	1		
Central Africa.....	1		
South America.....	1		
Russian Empire.....	1		
Australasia.....	1	\$2.50 per vol.	\$1.65 per vol.
On the Congo.....	1		
The Voyage of the Vivian.....	1		
Young Nimrods in North America.....	1	\$1.65 per vol.	
Young Nimrods Around the World.....	1		

LIST OF BOOKS.—Continued.

Books.	No. Vols.	Catalogue Price.	Price Bid.
TRAVELS AND DISCOVERIES.			
<i>The Zigzag Books :</i>			
Zigzag Journeys in the Antipodes.....	1	\$2.25 per vol.	\$1.25 per vol.
Zigzag Journeys in India.....	1		
Zigzag Journeys in the Sunny South.....	1		
Zigzag Journeys in the Levant.....	1		
Zigzag Journeys in Acadia and New France.....	1		
Zigzag Journeys in Northern Lands.....	1		
Zigzag Journeys in the Occident.....	1		
Zigzag Journeys in the Orient.....	1		
Zigzag Journeys in Classic Lands.....	1		
Zigzag Journeys in Europe.....	1		
<i>Famous Books for Young People :</i>			
Poor Boys Who Became Famous.....	1	\$1.50 per vol.	\$0.97 per vol.
Girls Who Became Famous.....	1		
Famous American Authors.....	1		
Famous American Statesmen.....	1		
Boys' Book of Famous Rulers.....	1		
Girls' Book of Famous Queens.....	1		
Life of Lafayette, the Knight of Liberty.....	1		
Chivalric Days and Youthful Deeds. By E. S. Brooks.....	1		
Historic Boys : Their Endeavors and Their Achievements.....	1		
Historic Girls. Stories of Girls who have Influenced the History of Their Times.....	1	\$2.00 per vol.	\$1.30 per vol.
Uncle Sam's Medal of Honor.....	1		
Plutarch for Boys and Girls. Selected and edited by John S. White, LL. D.....	1		
Herodotus for Boys and Girls.....	1		
The Natural History of Pliny the Elder. Edited for Boys and Girls.....	1		
The Travels of Marco Polo. Edited for Boys and Girls.....	1	\$2.50 per vol.	\$1.60 per vol.

REPORT OF THE PRINCIPAL FOR THE SCHOOL YEARS 1886-7 AND 1887-8.

To the State Board of Education :

GENTLEMEN,—In obedience to custom and requirement, I present herewith the following report of the Normal School for the two school years indicated above. These years cover a period of satisfactory and encouraging prosperity. Brief tables given herewith exhibit a steady increase in enrollment and attendance. They show that the number in membership during the year ending June, 1888, exceeds by nearly one hundred the corresponding year next preceding the period included in the report. These two years have also been characterized by great zeal on the part of both teachers and pupils, and by serious, steady and successful work throughout the school.

I cannot speak too strongly of the excellent spirit and the high moral tone that characterize the institution, nor of the earnestness of its students and the steadiness of purpose that so conspicuously manifests itself. I observe, also, with great satisfaction, a decided growth in true professional spirit

among our students. This exhibits itself in greater interest in the strictly professional work of the several courses and in increasing enthusiasm in the practice teaching done in the training school.

IN MEMORIAM.

Before entering upon the details usually embodied in school reports, I beg leave to call your attention to the sad fact that each of the included years is marked by the death of a noble and earnest friend of the institution under your charge.

On May 28, 1887, Hon. David Porter Mayhew died at his home in Detroit. His work in the Normal School began in the department of natural and physical science in 1857. In 1865, upon the resignation of the first principal, Hon. A. S. Welch, now professor of psychology in the Iowa State Agricultural College, Professor Mayhew was elected to fill the vacancy thus caused. He continued in this position until the summer of 1870, when he retired from active duty as a teacher and gave himself up mainly to his private affairs and to the education of his children. Early in 1874 he was appointed a member of the State Board of Education to fill a vacancy caused by the death of Hon. Daniel E. Brown. As a professor, as principal, and as a member of your board, he served the State with conscientious fidelity and great ability. As a man he was beloved by all who knew him. He was a tireless worker and a genius in his profession. He was a Christian gentleman, full of the child-like spirit. Thousands of men and women in Michigan, once his pupils, remember him with profound respect and sincere gratitude and love.

Hon. Witter Johnson Baxter died at his home in Jonesville on February 6, 1888. Like Mr. Mayhew, he began his career as a member of the board by appointment of the Governor. His appointment bears date July 21, 1857. His service in the board was continuous until his resignation in 1881. During a long succession of years he was its honored president. To no man, living or dead, does the Normal School owe a larger debt of gratitude. No educational institution ever had a more loyal friend or a firmer supporter. It is to-day reaping the fruit of his wisdom and his unstinted labor. He was an uncompromising friend of free education, and an unflinching advocate and worker in its behalf. His active membership in the Board of Education covered almost a quarter of a century of willing and most efficient effort. I am glad to offer this word of sincere tribute to the memory of a self-sacrificing, great-souled philanthropist, whose name is so thoroughly inwoven into the history of the Michigan State Normal School.

SUMMARY OF ENROLLMENT, ETC.

1886-7.

Normal Department.....	675.
Training School :	
Primary Grades.....	185
Grammar ".....	109—244
Total (all transfers excluded).....	919

1887-8.

Normal Department.....	714:
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Training School :	
Primary Grades.....	148
Grammar Grades.....	91—234
Total (all transfers excluded).....	
948	

The following statement exhibits the increase in enrollment for the preceding eight years :

1880-1.....	318	1884-5.....	519
1881-2.....	330	1885-6.....	628
1882-3.....	398	1886-7.....	675
1883-4.....	475	1887-8.....	714

The number of graduates for the two years herein reported upon is as follows :

In June, 1887.....	100
In June, 1888.....	117
Total for the two years.....	
217	

In the matter of courses pursued by these, the following are the facts :

In regular four years' courses.....	82
In the English course (3 years).....	111
In the English course with a language added.....	24
Total for the two years.....	
217	

The following is a fact of some interest: The graduates of the last three years number 317, and, of these, 300 are known to be regularly employed in teaching. In other words, at least 95 per cent. of the graduates of the last three years are now engaged in the practice of the profession for which the Normal School has prepared them. It is difficult to get, and to keep up, similar statistics for the classes of earlier years, but we know that a vast majority of those who complete our courses of study engage in teaching and continue in the work through many years. Of our under graduates, nearly all engage in teaching during their course of instruction, and a great many of them were teachers of considerable experience before coming to us.

DURATION OF THE SCHOOL YEAR.

Schools like ours ought, in my judgment, to provide for a near approach to two hundred days of honest school work in each year. The schedule which you have adopted for the year beginning September 3, 1888, provides for very nearly this amount of actual working time. I am glad to see the Normal School setting forth a good example in this regard. The tendency of the times is in the direction of shortening the academic year. I believe this to be a mistake and against good school policy.

BUILDINGS AND EQUIPMENTS.

Friends of the school who have known how we have been crippled for want of adequate room for the comfortable and convenient accommodation of our rapidly increasing membership, will be pleased to know that at last we have room according to our needs. I am glad to bear testimony to the judicious expenditure of the \$60,000.00 appropriated by the legislature of 1886 after careful examination into the facts. At this date, December, 1888,

we find ourselves in full possession of a building, ample for all our wants, and in all respects convenient and suited to our purposes.

I am sure that the next legislative committee will find that prudent use has been made of the funds granted for the erection and furnishing of additions to our building.

We are now well equipped with a capacious and beautiful hall for morning exercises, lectures, etc.; adequate study halls for our students; convenient recitation and lecture rooms; a fine library and reading room; and excellent facilities for progressive instruction in Natural and Physical Sciences, Geography, Drawing, Mathematics and History.

The method of heating from a separate boiler house is working successfully and giving us a sense of security against danger by fire, that is most comfortable and satisfactory when compared with the discomfort and anxiety felt under the former system. The wisdom of the method adopted is also justified by the improvement in the health of the students and teachers.

ROOMS FOR THE SOCIETIES.

In this connection, I desire to express my gratification that the wants of our four literary societies have not been neglected in the plans of the enlarged buildings. As an added means of culture they are worthy of the consideration which they have received at your hands. Each has now a permanent society home, and we can already see a most encouraging progress in the zeal and activity of members.

COURSES OF STUDY.

During the last two years these have been materially strengthened and improved. They are now ample, so far as number and variety are concerned, to meet all reasonable requirements. They are fully set forth in the accompanying schedule. In this connection I desire to say a few words concerning

ADVANCED COURSES OF STUDY.

The true function of our Normal School is to equip teachers for all grades of schools, including not only primary and grammar schools, but high schools, and the superintendence of village and city schools as well. Many of our students, graduates in our longer courses, would gladly return to us for further study and preparation if opportunity were afforded. The Normal School ought to cover the ground marked out above so thoroughly that there could be no question concerning the competency of our graduates for the lines of educational activity thus outlined.

To this end I would be glad to see provision made for optional courses in advanced study—courses which would justly lead to a literary or pedagogical degree. Such a plan would not only meet the wants of our own graduates, but it would give also a needed opportunity to graduates of colleges and of the University to obtain in a brief post-graduate course that necessary professional training under expert supervision and criticism, which only thoroughly equipped normal schools can offer. Any one of the present four year courses could be so extended with very small additional cost in operating the school.

If to any one of these (four year) courses should be added such suitable topics of study as could be selected from other courses, which the school already offers and provides instruction for, little more would need to be done. Additional instruction required on this account would be nearly if not quite balanced by the practice teaching in higher grades, which such advanced pupils would willingly render. I respectfully commend this matter to your continued attention.

TEXT BOOKS.

A full list of text-books used in the Normal School will be found in the Annual Register.

I am glad to know that you have already resolved that after the current year the use of text-books will be free to our students.

In modern times, text-books are, in most subjects of study—as truly a school necessity as are teachers, and any argument which will justify free teaching will also apply to the free provision of other essential means of instruction.

Our students are working young men and women who earn their little money by the hardest toil. The cost of books is often “the last straw that breaks the camel’s back.” I shall be glad to see them relieved to this extent. I also believe that the State will find it to its advantage to make the way as easy as is possible for those who are preparing for public service in the schools. Many other states go still further in this direction, even to the extent of furnishing free transportation to the students of their normal schools.

THE TRAINING SCHOOL.

This most important department of our school might easily be made vastly more valuable, and I heartily approve of the proposed change in its organization. It ought not to be solely a school for training, but it should be a school of observation as well. Thorough training in teaching under competent supervision and searching criticism is, in my judgment, essential to anything like adequate preparation for the teacher’s work. No normal school can properly do its work unless it can offer good facilities in this direction. The study of theory is of course essential, but practice, always under supervision, in applying principles is necessary to a working understanding of them. But abundant and systematic observation ought, by all means, to precede, and then for a time to run parallel with, practice. This is a vast advantage to the pupil teacher and a reasonable measure of safety to the children under his charge. I am more and more convinced that the character and amount of observation and training, more than anything else except sound scholarship, determines the value of and the standing of a normal school.

Every school of observation and training should be free to do its best work. It ought not to be trammelled by any unnecessary limitations. The pupil teacher who seeks its advantages should be as free as possible from all other school exercises. Practice in such a school should be the crowning and most profitable work of every prospective normal school graduate, and nothing should be allowed to interfere with his giving his best interest and utmost energy to it. I am in favor of adding if necessary, a half year to every one of our courses in order that our students may first complete all their academic work, and then give their full time, or certainly as much as may

be needed, to getting, to the utmost, the advantages which a perfectly equipped school of observation and training offers. I am satisfied that our students are at present pressed with too much parallel work while they are getting their special training. They ought to come to this work fresh, and full of vigor and enthusiasm, and not jaded and wearied with the exactions of other duties. One or two other daily exercises should be considered as the maximum of parallel work required or even allowed.

Heretofore we have lacked sufficient accommodation to make our training school a thoroughly good school of observation as well as of practice. The munificence of the State of Michigan has now made such a school possible, and I hope we may now have it, and that time suitable to its importance will be provided for it in our courses. The proper carrying out of such a plan means labor and some additional cost.

We should have another teacher to give model instruction and exemplify model management, to supervise and to criticise the work of pupil teachers when they are put in charge of the model primary room or other primary grades and to work in fourth and fifth grade classes, as may be found necessary.

We should also have a competent kindergartener who, in my judgment, will be needed throughout the entire school year. She should look to the kindergarten, give instruction in its methods and supervise pupil teachers taking a special kindergarten course, and the entire training school corps should be active in finding out and practicing the best methods of adjusting kindergarten methods to the needs of the first four primary school grades.

These added teachers will make necessary the expenditure of \$1,400 or \$1,500 per year for salaries; \$250 per year will also be needed for kindergarten and training school supplies.

For the purposes indicated above our present daily session of this department, of two and a half hours, is too brief. At least four hours each day will be required. This means a morning as well as an afternoon session, and this, again, means continual conflict between the recitations of pupil teachers and their training school duties, and also weary and perfunctory work, unless it is provided that all or nearly all academic courses be finished before the work in observation and training begins. This I believe to be the true and only solution to the difficulty, and I ask your serious attention to it. Here, as in the case of advanced courses, I would open wide the doors to graduates of other institutions.

Whether the kindergarten exactly as wrought out by Frederick Froebel will ever become an American institution or not is a question not easy to answer, but I have no doubt at all that kindergarten methods will very generally make their way into our primary schools.

There is already much inquiry for primary teachers expert in this direction, and there will be more such inquiry. We ought, if we are to hold our true position as a normal school, to prepare a supply to meet the demand, and indeed to meet all legitimate demands that the public schools can make upon us.

You have already provided for a kindergarten in the Normal School, but mere looking at one will not make teachers expert in its methods. All along the line of modern primary school work we need to make our efforts systematic and continuous in order that they may be effective. As means to this end I submit the foregoing suggestions.

It is also worth while to notice that the subject of instruction in manual training in the schools is at present occupying the attention not only of educators, but of a multitude of thinking people outside the schools.

"If I am not mistaken in the signs of the times, there will soon be a demand for teachers able to supervise and intelligently direct this coming branch of school instruction. This demand, when it comes, will insist upon recognition in our training school. The changes in the session time, as suggested above, will be found convenient in any attempt which we may desire to make in this direction.

Very respectfully submitted,
JOHN M. B. SILL,
Principal.

D.

COURSES OF INSTRUCTION.

SCIENTIFIC COURSE.

First Year.

First Term—1. Vocal Music. 2. Elementary Drawing. 3. Geography, 10 weeks; Penmanship, 10 weeks. 4. Algebra.

Second Term—1. Arithmetic, 10 weeks; English Grammar, 10 weeks. 2. Reading and Orthography. 3. Algebra. 4. Civil Government, 10 weeks; Elementary Professional Instruction, 10 weeks.

Second Year.

First Term—1. Physiology and Hygiene, 15 weeks; Narcotics, 5 weeks. 2. Rhetoric. 3. Geometry. 4. Advanced Drawing.

Second Term—1. History of the United States. 2. Botany. 3. English Literature. 4. Geometry.

Third Year.

First Term—1. Zoölogy, 10 weeks; Comparative Zoölogy, 10 weeks. 2. General History. 3. Elementary Physics. 4. Mental and Moral Science.

Second Term—1. Higher Algebra. 2. Advanced Physics. 3. Professional Training in Common Branches. 4. Mental Science Applied to Teaching; School Management.

Fourth Year.

First Term—1. Chemistry. 2. Physical Technics, 10 weeks; Political Science, 10 weeks. 3. Geology. 4. Practice Teaching. Essays.

Second Term—1. Chemistry, 10 weeks; Astronomy, 10 weeks. 2. Trigonometry, 10 weeks; Surveying, 10 weeks. 3. Practice Teaching. 4. Training in Physical Science, 10 weeks; History of Education, 10 weeks. Essays.

Substitutions.

Two years of German or French will be accepted in the foregoing course as substitutes for studies as follows: Zoölogy and Comparative Zoölogy, Higher Algebra, Physical Technics, Political Science, Trigonometry and Surveying. This substituted course is called "Scientific with Shorter German (or French)."

LITERARY COURSE.

First Year.

First Term—1. Vocal Music. 2. Reading and Orthography. 3. Civil Government, 10 weeks; Elementary Professional Instruction, 10 weeks. 4. Algebra.

Second Term—1. Arithmetic, 10 weeks; English Grammar, 10 weeks. 2. Elementary Drawing. 3. Algebra. 4. Penmanship, 10 weeks; Geography, 10 weeks.

Second Year.

First Term—1. Physiology and Hygiene, 15 weeks; Narcotics, 5 weeks. 2. United States History. 3. Geometry. 4. Rhetoric.

Second Term—1. General History. 2. Botany. 3. English Literature. 4. Geometry.

Third Year.

First Term—1. Zoölogy, 10 weeks; Comparative Zoölogy, 10 weeks. 2. Advanced English Literature, 10 weeks; Political Science, 10 weeks. 3. Elementary Physics. 4. Mental and Moral Science.

Second Term—1. American Literature. 2. Grecian and Roman History. 3. Professional Training in Common Branches. 4. Mental Science Applied to Teaching; School Management.

Fourth Year.

First Term—1. Chemistry. 2. English Constitutional History. 3. English Masterpieces. 4. Practice Teaching. Essays.

Second Term—1. Constitutional History of United States. 2. Study of Masterpieces. 3. Practice Teaching. 4. Training in Physical Science, 10 weeks; History of Education, 10 weeks. Essays.

ENGLISH COURSE.

First Year.

First Term—1. Arithmetic, 10 weeks; English Grammar, 10 weeks. 2. Reading and Orthography. 3. Geography, 10 weeks; Penmanship, 10 weeks. 4. Elementary Drawing.

Second Term—1. Algebra. 2. Physiology and Hygiene, 15 weeks; Narcotics, 5 weeks. 3. Vocal Music. 4. Botany.

Second Year.

First Term—1. Algebra. 2. Civil Government, 10 weeks; Elementary Professional Instruction, 10 weeks. 3. Rhetoric. 4. History of United States.

Second Term—1. Geometry. 2. Elementary Physics. 3. Mental and Moral Science. 4. Book-keeping, 10 weeks; Professional Training in Common Branches, 10 weeks.

Third Year.

First Term—1. Chemistry. 2. Professional Training in Common Branches, 10 weeks; Political Science, 10 weeks. 3. Mental Science Applied to Teaching; School Management. 4. Practice Teaching. Essays.

Second Term—1. English Literature. 2. General History. 3. Practice Teaching. Training in Physical Science, 10 weeks; History of Education, 10 weeks. Essays.

NOTE.—The full or the two years' Language Course may be *added* to the English Course, in which case such course is called the "English with Full (or Shorter) Latin, (or Greek, or German, or French)," as the case may be.

ANCIENT CLASSICAL COURSE.

First Year.

First Term—1. Arithmetic, 10 weeks; English Grammar, 10 weeks. 2. Latin. 3. Geography, 10 weeks; Penmanship, 10 weeks. 4. Physiology and Hygiene, 15 weeks; Narcotics, 5 weeks.

Second Term—1. United States History. 2. Latin. 3. Algebra. 4. Civil Government, 10 weeks; Reading and Orthography, 10 weeks.

Second Year.

First Term—1. Algebra. 2. Rhetoric. 3. Elementary Physics. 4. Latin.

Second Term—1. Geometry. 2. Vocal Music. 3. Grecian and Roman History. 4. Latin.

Third Year.

First Term—1. Geometry. 2. Latin, 3. Greek. 4. Mental and Moral Science.

Second Term—1. Latin. 2. Greek. 3. Professional Training in Common Branches. 4. Mental Science applied to Teaching; School Management.

Fourth Year.

First Term—1. Chemistry. 2. Latin. 3. Greek. 4. Practice Teaching. Essays.

Second Term—1. Latin. 2. Greek. 3. Practice Teaching. 4. Training in Physical Science, 10 weeks; History of Education, 10 weeks. Essays.

MODERN CLASSICAL COURSE.

First Year.

First Term—1. Arithmetic, 10 weeks; English Grammar, 10 weeks. 2. German. 3. Geography, 10 weeks; Penmanship, 10 weeks. 4. Physiology and Hygiene, 15 weeks; Narcotics, 5 weeks.

Second Term—1. United States History. 2. German. 3. Algebra. 4. Civil Government, 10 weeks; Reading and Orthography, 10 weeks.

Second Year.

First Term—1. Algebra. 2. Rhetoric. 3. Elementary Physics. 4. German.

Second Term—1. Geometry. 2. Vocal Music. 3. German. 4. French.

Third Year.

First Term—1. Geometry. 2. General History. 3. French. 4. Mental and Moral Science.

Second Term—1. German. 2. French. 3. Professional Training in Common Branches. 4. Mental Science Applied to Teaching; School Management.

Fourth Year.

First Term—1. Chemistry. 2. German. 3. French. 4. Practice Teaching. Essays.

Second Term—1. German. 2. French. 3. Practice Teaching. 4. Training in Physical Science, 10 weeks; History of Education, 10 weeks. Essays.

PUBLIC INSTRUCTION.

LATIN AND GERMAN COURSE.

First Year.

First Term—1. Arithmetic, 10 weeks; English Grammar, 10 weeks. 2. Latin. 3. Geography, 10 weeks; Penmanship, 10 weeks. 4. German.

Second Term—1. Civil Government, 10 weeks; Reading and Orthography, 10 weeks; 2. Physiology and Hygiene, 15 weeks; Narcotics, 5 weeks. 3. Latin. 4. German.

Second Year.

First Term—1. Algebra. 2. Latin. 3. Rhetoric. 4. German.

Second Term—1. Algebra. 2. Grecian and Roman History. 3. Latin. 4. German.

Third Year.

First Term—1. Geometry. 2. United States History. 3. Latin. 4. Mental and Moral Science.

Second Term—1. Latin. 2. German. 3. Professional Training in Common Branches. 4. Mental Science applied to Teaching; School Management.

Fourth Year.

First Term—1. Elementary Physics. 2. Latin. 3. German. 4. Practice Teaching. Essays.

Second Term—1. Latin. 2. German. 3. Practice Teaching. 4. Training in Physical Science, 10 weeks; History of Education, 10 weeks. Essays.

SCIENTIFIC LATIN COURSE.

First Year.

First Term.—1. Arithmetic, 10 weeks; English Grammar, 10 weeks. 2. Elementary Drawing. 3. Geography, 10 weeks; Penmanship, 10 weeks. 4. Latin.

Second Term.—1. Physiology and Hygiene, 15 weeks; Narcotics, 5 weeks. 2. Latin. 3. Algebra. 4. Civil Government, 10 weeks; Reading and Orthography, 10 weeks.

Second Year.

First Term.—1. Algebra. 2. United States History. 3. Vocal Music. 4. Latin.

Second Term.—1. Rhetoric. 2. Botany. 3. Geometry. 4. Latin.

Third Year.

First Term.—1. Geometry. 2. Latin. 3. Elementary Physics. 4. Mental and Moral Science.

Second Term.—1. Latin. 2. Grecian and Roman History. 3. Professional Training in Common Branches. 4. Mental Science Applied to Teaching. School Management.

Fourth Year.

First Term.—1. Chemistry. 2. Latin. 3. Geology. 4. Practice Teaching. Essays.

Second Term.—1. Trigonometry, 10 weeks; Astronomy, 10 weeks. 2. Latin. 3. Practice Teaching. 4. Training in Physical Science, 10 weeks; History of Education, 10 weeks. Essays.

SCIENTIFIC GERMAN COURSE.

This course is the same as the "Scientific Latin" (see previous page), German dis-

placing Latin, except as follows : In the Fifth Term, German is omitted and General History taken instead ; and in the Sixth Term, English Literature takes the place of Grecian and Roman History.

SPECIAL COURSE WITH MUSIC.

First Year.

First Term.—1. Elementary Vocal Music with Methods. 2. Voice Culture 3. English Grammar, 10 weeks ; Arithmetic, 10 weeks. 4. Algebra.

Second Term.—1. Advanced Vocal Music with Methods. 2. Voice Culture. 3. Physiology and Hygiene or a language. 4. Algebra.

Second Year.

First Term.—1. Harmony. 2. United States History. 3. Elementary Physics or a language. 4. Voice Culture.

Second Term.—1. Harmony. 2. Mental and Moral Science. 3. Rhetoric or a language. 4. Voice Culture.

Third Year.

First Term.—1. Musical Composition. 2. Practice Teaching, Conducting, or Accompanying. 3. Geometry or a language. 4. Solo Singing.

Second Term.—1. Literature of Music. 2. English Literature or a language. 3. Practice Teaching, Conducting or Accompanying. 4. Solo Singing.

NOTE—In addition to the studies named above, the following are required of graduates in this course, viz.: Geography, Reading and Orthography, Civil Government and Penmanship ; also Geometry, Rhetoric and Physiology and Hygiene, provided these are displaced by a language.

E.

TEXT AND REFERENCE BOOKS.

History:

U. S. Colonial—*Doyle.*

U. S. Federal Period—*Johnston.*

Reviews—*King's Tabulations.*

General History—*Anderson.*

Mathematics:

Arithmetic—*Milne.*

Algebra—*Bellows.*

Geometry—*Bellows.*

Trigonometry—*Bellows.*

Surveying—*Bellows.*

Physical Sciences:

Astronomy—*Newcomb and Holden.*

Physics—*Gage.*

Chemistry—*Barker and Jones' Tables.*
Syllabus—*Strong.*

Natural Sciences:

Botany, Structural—*Bessey.*
Botany, Systematic—*Wood's Class Book, or Gray's Manual.*
Physiology and Hygiene—*Walker.*
Zoölogy—*Packard.*
Zoölogy, Comparative—*Orton.*

English:

Grammar—*Reed and Kellogg.*
Rhetoric—*D. J. Hill.*
English Literature—*Brooks.*
American Literature—*Royse.*
Orthography—*Salisbury.*
Book-keeping—*Wooley.*
Vocal Music and Voice Culture—*Pease.*
Civil Government—*Young and Const. of Michigan.*
Political Science—*Wayland.*
Mental Science—*Sully or Haven.*
Mental Science Applied to Teaching—*Putnam's Outlines.*
History of Education—*Painter or Compayré.*

Latin:

Grammar—*Harkness.*
First Lessons—*Jones.*
Cæsar—*Allen and Greenough.*
Cicero—*Allen and Greenough or Harkness.*

Latin :

Ovid—*Allen and Greenough or Lincoln.*
Vergil—*Frieze.*
Prose Composition—*Jones.*
Sight Reading—*Tomlinson.*

Greek :

Grammar—*Hadley and Allen.*
First Lessons—*Boise.*
Reader—*Moss.*
Prose—*Jones.*
Iliad—*Keep.*
Anabasis—*Boise.*
Sight Reading—*Jerram.*

German :

Grammar—*Brandt.*
Manual—*Lodeman.*
First Reader—*Macmillan.*
Goethe—*Hermann and Dorothea.*
Lessing—*Minna von Barnhelm.*
Gutzkow—*Zopf und Schwert.*

Schiller—*Wilhelm Tell*.
 Heine—*Prosa*.
 Goethe—*Egmont*.
 Goethe—*Prosa*.
 Goethe—*Iphigenie*.
 Goethe—*Torquato Tasso*.
 Lessing—*Nathan der Weise*.
 Bucheim—*Prose Composition*.
 Bucheim—*German Lyrics*.
 Wagner—*German Ballads*.
 Some German Work on Education.

French :

Macmillan, Course I.
 Macmillan, Course II.
 Macmillan, Course III.
 Mme. de Girardin—*La Joie fait Peur*.
 Scribe and Legouv —*La Bataille de Dames*.
 Hal vy—*L'Abbe Constantin*.
 Sandeau—*Mlle. de la S igli re*.
 G. Sand—*La Mare au Diable*.
 Lacombe—*Petite Histoire du Peuple Fran ais*.
 Corneille—*Le Cid*.
 Moli re—*Les Femmes Savantes*.
 Racine—*Esther*.
 Hugo—*Hernani*.
 Legouv —*La Lecture en Action*.
 Sainte Beuve—*Causeries*.
 Some French Work on Education.

TEXT BOOKS OF TRAINING SCHOOL.

Arithmetic—*Bellows, Olney*.
 Language—*Swinton, Reed and Kellogg*.
 Readers—*Appleton, Barnes*.
 Geography—*Appleton's Our World*.
 U. S. History—*Higginson, Swinton*.
 Penmanship—*Spencerian*.
 Dictionary—*Webster*.
 Music—*Pease, Tufts and Holt*.

TREASURER'S REPORT.

To the State Board of Education :

GENTLEMEN,—I hand you, herewith, my report as Treasurer for the two fiscal years ending June 30, 1888:

Exhibit I. contains my predecessor's statement for the quarter ending Dec. 31, 1886, which is the first quarter of the new fiscal year as determined by the last legislature. Exhibit II. contains my statement for the remainder of that year. Exhibit III. is my statement for the year ending June 30, 1888. Exhibit IV. is a summary of the inventory of the property of the Board.

In addition to the foregoing, I furnish you with a statement showing the transactions of this Board with the State of Michigan for the two years ending Sept. 30, 1888, that being the period of the last settlement I have had with the Auditor General at the time of making this report.

Yours respectfully,

S. S. BABCOCK,
Treasurer.

STATE BOARD OF EDUCATION.

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EXHIBIT I.

EDGAR REXFORD, TREASURER.—DR.

1886.			
Oct. 1.	1.	To balance from last quarter.....	\$774 72
Oct. 1.		State Treasurer's check, No. 20523.....	9,734 00
Dec. 31.		Admission fees collected.....	1,800 00
			<hr/> \$12,308 72

CR.

I.—On Account of Current Expenses.

Date.	No. of Voucher	To Whom Paid.	For What Purpose.	Amount.
1886.				
Oct. 31.	1	Pay roll for October.....	Salary account.....	\$3,229 00
31.	2	American Express Co.....	Freight and express..	25
16.	3	W. H. Sweet.....	Diploma account.....	76
16.	4	E. E. Osband.....	Mowing lawn.....	8 75
16.	5	Will Putnam.....	Organ blowing.....	2 00
16.	6	Telephone & Tel. Const. Co.....	Rent of 2 telephones..	24 00
18.	7	J. M. B. Sill.....	Bell gong.....	3 00
18.	8	George Bate.....	Extra labor.....	5 20
18.	9	Frank Smith.....	General supplies.....	50 27
19.	10	D. Putnam.....	Carpet lining and thread	10 50
29.	11	E. W. Bower.....	Brooms.....	3 00
Dec. 10.	12	Theo. H. Eaton & Son	Ink.....	3 75
10.	13	A. Harvey & Son.....	Grate for boiler.....	15 00
10.	14	Detroit Electrical Works.....	Supplies for bells.....	15 14
10.	15	Adam J. Orth.....	Slates and cartage....	4 50
10.	16	The Richmond & Backus Co.....	Paper.....	2 00
31.	17	The Peninsular Paper Co.....	".....	4 90
31.	17½	The Ypsilanti Paper Co.....	".....	17 81
Nov. 30.	18	Pay roll for November.....	Salary account.....	3,229 00
Dec. 1.	19	Will Putnam.....	Pumping organ.....	2 00
21.	20	P. R. Cleary.....	Teaching penmanship..	75 00
31.	21	Chas. Fleming.....	Repairs.....	189 99
31.	22	Chas. Fleming.....	".....	40 68
11.	23	Chas. Fleming.....	".....	87 72
17.	24	Geo. M. Bates.....	Extra labor.....	3 00
18.	25	T. A. Norton.....	Museum.....	4 00
18.	26	J. E. Bassett.....	Repairs.....	4 68
20.	27	Homer Briggs.....	Freight and cartage..	6 99
22.	28	Will Putnam.....	Pumping organ.....	1 50
24.	29	J. M. B. Sill.....	Expenses.....	8 60
30.	30	E. A. Strong.....	Apparatus.....	114 40
31.	31	Tribune Printing Co.....	Advertising.....	30 00
31.	32	C. J. Whitney.....	Piano.....	280 00
31.	33	Henry C. Hart Mfg. Co.....	Desks.....	219 75
31.	34	R. N. Reynolds.....	Microscopes.....	50 00
31.	35	Frederick E. Brandis.....	Repairing telescope...	189 35
31.	36	Ward & Howell.....	Museum.....	50 00
31.	37	A. Harvey & Son.....	Grates.....	30 00
31.	38	Detroit Electrical Works.....	Apparatus.....	7 60
31.	39	Union School Furniture Co.....	Desks.....	4 99
31.	40	A. P. Gage.....	Apparatus.....	45 25
31.	41	Edgar Rexford.....	Services as Treasurer..	150 00
31.	42	Pencil & Hillis.....	Repairs.....	1 25
31.	43	Ypsilanti Postoffice.....	Postage.....	30 00
31.	44	".....	".....	5 70
31.	45	Ypsilanti Gas Co.....	Lights.....	78 60
31.	46	Frank Smith.....	General supplies.....	24 65
31.	47	Smith & Powers.....	Printing.....	5 75
31.	48	Wallace & Clark.....	Tables.....	27 00
31.	49	E. Sampson, Jr.....	Supplies.....	1 62
31.	50	R. C. Hayton.....	Organ repairs.....	1 20
31.	51	Eberbach & Son.....	Chemicals.....	11 82
31.	52	".....	".....	33 59
31.	53	".....	".....	9 95
31.	54	".....	".....	5 58

PUBLIC INSTRUCTION.

EXHIBIT I.—Continued.

Date.	No. of Voucher	To Whom Paid.	For What Purpose.	Amount.	
1886.					
31....	55	Eberbach & Son.....	Chemicals.....	\$23 10	
31....	56	" ".....	".....	38 49	
31....	57	" ".....	Apparatus.....	75 76	
31....	58	Walter Hewett.....	Tuning piano.....	5 00	
31....	59	" ".....	" ".....	5 00	
31....	60	" ".....	Tuning organ & piano.....	20 00	
31....	61	J. M. B. Sill.....	Expenses.....	7 85	
31....	62	Ypsilanti Com. Pub. Co.....	Printing blanks.....	73 55	
31....	63	Robt. H. Morton.....	Repairs.....	3 80	
31....	64	C. C. Vroman.....	Carpet lining.....	3 82	
31....	65	Peninsular Paper Co.....	Paper.....	32 70	
31....	66	Pay roll for December.....	Salary account.....	3,264 00	
					\$11,908 02
		II.—On Account of Library.			
Sept. 30....	1	John MacFarlane.....		\$125 47	
30....	2	John MacFarlane.....		30 15	
Nov. 16....	3	John W. Wise.....		5 50	
16....	4	John L. Atwater.....		12 00	
Dec. 29....	5	Gustav E. Stecher.....		31 80	
29....	6	H. R. Pattengill.....		1 50	
29....	7	Publishers Library Journal.....		7 00	
29....	8	Publishers of the Nation.....		3 00	
29....	9	Munn & Co.....		3 00	
29....	10	A. Lodeman.....		3 00	
29....	11	The North American Review.....		5 00	
29....	12	Harper & Brothers.....		4 00	
29....	13	Popular Science News Co.....		1 00	
29....	14	A. C. Armstrong & Son.....		3 00	
29....	15	Science Co.....		5 00	
29....	16	Magazine of American History.....		5 00	
29....	17	Wm. W. Payne.....		2 00	
29....	18	McCalla & Stavely.....		4 00	
29....	19	Century Co.....		4 00	
29....	20	D. Appleton & Co.....		5 00	
29....	21	New England Publishing Co.....		5 50	
29....	22	F. W. Christern.....		11 70	
29....	23	Leonard Scott Publishing Co.....		11 50	
29....	24	Genn & Co.....		8 00	
29....	25	Microscope Publishing Co.....		1 00	
29....	26	A. M. Elliott.....		1 00	
29....	27	Houghton, Mifflin & Co.....		10 50	
29....	28	Catholic Publishing Society.....		4 00	
29....	29	Florence Goodison.....		6 76	
29....	30	Ypsilanti Commercial Printing Co.....		14 00	
29....	31	" ".....		10 35	
29....	32	John MacFarlane.....		33 66	
29....	33	A. Lodeman.....		2 05	
29....	34	Fronie L. Stevens.....		2 00	
29....	35	John W. Wise.....		4 75	
29....	36	Florence Goodison.....		13 00	
29....	37	Frank Smith.....		10 51	405 70
		Total.....			\$12,308 72

STATE BOARD OF EDUCATION.

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EXHIBIT II.

S. S. BABCOCK, TREASURER.—DR.

I.—On Account of Legislative Appropriations.

1887.					
Jan. 17.	To	Part State Treasurer's check No. 23150.....	\$8,125 00		
April 23.		Part State Treasurer's check.....	10,964 00		
					\$19,089 00

II.—On Account of Normal School Interest.

Jan. 17.	To	Part of State Treasurer's check 22150.....	\$998 00		
April 23.		Part of State Treasurer's check.....	1,189 02		
					\$2,187 02

III.—On Account of Admission Fees.

Feb. 1.	To	Received from B. L. D'Ooge, collector.....	\$1,200 00		
Mar. 31.		Received from B. L. D'Ooge, collector.....	250 00		
June 30.		Received from B. L. D'Ooge, collector.....	123 50		
					\$1,573 50

IV.—On Account of Laboratory Fees.

April 2.	To	Received from E. A. Strong, collector.....	\$120 00		
June 2.		Received from E. A. Strong, collector.....	43 00		
					\$163 00

V.—On Account of Diploma Fees.

June 30.	To	Received from B. L. D'Ooge, collector.....	\$204 00		
" 30.		Received from Olive M. Tibbits.....	3 00		
" 30.		Received from Joseph B. Estabrook.....	3 00		
					\$210 00

VI.—On Account of Interest on Deposits.

April 29.	To	Wayne County Savings Bank paid.....	\$28 48		
					28 48
					\$23,200 96

CR.

I.—On Account of Current Expense.

Date.	No of Voucher	To Whom Paid.	For What Purpose.	Amount.	
1887.					
Jan. 31....	1	American Express Co.....	Express.....	\$7 95	
Feb. 2....	2	Chas. E. Sampson.....	Apparatus.....	1 50	
2....	3	Chas. E. Sampson.....	Furniture.....	3 25	
2....	4	Michigan Bell Telephone Co.....	Use of line.....	2 85	
2....	5	E. A. Bovee.....	Repairs.....	3 00	
2....	6	Pay-roll for January.....	Salary account.....	3,284 00	
9....	7	Tel. and Telephone Const. Co.....	Rent of phone.....	12 00	
18....	8	Lewis Howard.....	Extra labor.....	2 65	
18....	9	Chas. Fleming.....	Repairs.....	22 16	
18....	10	Chas. A. Norton.....	Extra labor.....	9 00	
18....	11	Richmond & Harris.....	Furniture.....	14 00	
18....	12	McElcheran & McAndrews.....	Furniture.....	3 25	
19....	13	Drury & Taylor.....	Hardware.....	10 16	
19....	14	E. A. Strong.....	Express.....	6 40	
19....	16	Will Putnam.....	Pumping organ.....	2 00	
19....	15	Barnum & Earl.....	Repairing clock.....	2 00	
19....	17	J. M. B. Sill.....	Expenses.....	13 24	
19....	18	W. C. Stewart.....	Hardware.....	12 77	
March 1....	19	February pay-roll.....	Salary account.....	3,266 00	
15....	20	Smith & Powers.....	Printing supplies.....	5 00	
15....	21	Gulley, Barnum & Co.....	Printing supplies.....	7 50	
15....	22	Charles Norton.....	Extra labor.....	4 50	
15....	23	Peninsular Paper Co.....	Supplies.....	4 64	
2....	24	Eberbach & Son.....	Apparatus & chemi'ls.....	122 73	
2....	25	Homer Briggs.....	Freight and express....	9 86	
31....	26	Pay-roll for March.....	Salary account.....	3,266 00	
31....	27	Frank Smith.....	Supplies.....	12 50	
31....	28	Barnes Br's.....	Supplies.....	1 70	
31....	29	W. O. Stevens.....	Furniture.....	6 95	
31....	30	Ypsilanti Gas Co.....	Lights.....	76 20	
31....	31	Walter Hewitt.....	Tuning piano.....	6 00	
31....	32	J. M. B. Sill.....	Expenses.....	14 90	

PUBLIC INSTRUCTION.

EXHIBIT II.—Continued.

Date.	No. of Voucher	To Whom Paid.	For What Purpose.	Amount.	
1887.					
March 31..	83	P. R. Cleary.....	Teaching.....	\$50 00	
April 30..	34	Pay-roll for April.....	Salary account.....	8,449 00	
May 14....	35	Fillmore & Scoville.....	Lumber.....	3 63	
14....	36	Charles C. Pulford.....	Extra labor.....	6 90	
14....	37	Chas. Fleming.....	Labor and materials..	9 98	
14....	38	Tel. & Tel. Const. Co.....	Rent of telephone.....	12 00	
14....	39	John Bibb.....	Extra labor.....	8 00	
14....	40	Richmond & Backus Co.....	Ink, etc.....	3 00	
31....	41	Pay-roll for May.....	Salary account.....	8,449 00	
31....	42	Mich. Bell Telephone Co.....	Extra messages.....	1 60	
June 3....	43	J. M. B. Sill.....	Express and freight...	21 98	
3....	44	E. A. Strong.....	Chemicals & apparat's	4 70	
3....	45	Normal News.....	Advertising.....	50 00	
3....	46	E. A. Strong.....	Two desiccators.....	10 00	
3....	47	Eberbach & Son.....	Apparatus.....	2 80	
3....	48	A. Harvey & Son.....	Repairing boilers.....	20 80	
3....	49	Peninsular Paper Co.....	Rough paper.....	4 80	
3....	50	Calvert Lith. Co.....	Diploma blanks.....	52 50	
4....	51	James Hobson.....	Bird perches.....	9 50	
4....	52	Fred Pease.....	Pumping organ.....	4 00	
2....	53	Frank Norton.....	Taxidermist.....	5 00	
4....	54	Union School Fur. Co.....	Erasers.....	9 00	
30....	55	Pay-roll.....	Salary account.....	8,449 00	
30....	56	Walter Hewitt.....	Tuning organ & piano	25 00	
30....	57	C. D. McLouth.....	Extra teaching.....	25 00	
30....	58	Fred Pease.....	Pumping organ.....	2 00	
30....	59	W. H. Brooks.....	Writing names on diplomas	26 00	
30....	60	W. C. Stevens.....	Rent of stoves, etc....	21 87	
30....	61	Ladies' Library Association.....	Commencem't dinner..	175 00	
30....	62	Ypsilanti Gas Co.....	Lights.....	44 80	
30....	63	Coe Bros.....	Printing.....	43 80	
30....	64	J. M. B. Sill.....	Sundries.....	19 97	
30....	65	C. K. Renford & Sons.....	Coal.....	9 40	
30....	66	C. C. Pulford.....	Extra labor.....	6 20	
30....	67	Peninsular Paper Co.....	Working paper.....	8 40	
30....	68	Frank Smith.....	Sundry supplies.....	16 52	
30....	69	Smith & Powers.....	Printing catalogue....	239 91	
30....	70	Aldine Printing Co.....	Printing invitations..	12 00	
					\$21,508 72
		II.—Account of Library.			
Feb. 18....	1	John MacFarlane.....		\$15 76	
18....	2	Ypsilanti Commercial Printing Co.....		7 75	
June 3....	3	John MacFarlane.....		22 85	
3....	4	Q. P. Index.....		1 00	
3....	5	The Public Opinion Co.....		3 00	
3....	6	Florence Goodison.....		1 15	
3....	7	William A Murray.....		1 00	
3....	8	Ypsilanti Commercial Printing Co.....		15 20	
30....	9	Jno. L. Atwater.....		6 00	
30....	10	Coe Bros.....		18 55	
30....	11	John MacFarlane.....		8 60	
30....	12	F. W. Christien.....		10 80	
30....	13	W. H. Beechler.....		3 00	114 66
		Total disbursements.....			\$21,623 38
		Balance to new account.....			1,667 57
					\$23,290 95

STATE BOARD OF EDUCATION.

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EXHIBIT III.

S. S. BABCOCK.—DR.

I.—CURRENT EXPENSE.

1887.
July 1. To balance from last quarter..... \$1,232 23

• I.—On account of Appropriations.

Aug. 20. To part State Treasurer's check No. 23630..... \$9,835 00
Nov. 10. " " " " " " 26916..... 9,754 00
1888.
Feb. 8. " " " " " " 28567..... 9,056 00
April 30. " " " " " " 29661..... 10,820 00
\$38,465 00

II.—On Account of Normal School Interest.

1887.
Aug. 20. To part State Treasurer's check No. 23630..... \$1,165 00
Nov. 10. " " " " " " 26916..... 1,023 44
1888.
Feb. 8. " " " " " " 28567..... 944 00
April 30. " " " " " " 29661..... 1,180 00
4,312 44

III.—On Account of Admission Fees.

1887.
Dec. 2. To W. H. Smith, clerk, paid..... \$2,145 00
1888.
Mar. 25. " " " " " " 1,500 00
June 30. " " " " " " 512 50
4,157 50

IV.—On Account of Laboratory Fees.

Feb. 8. To W. H. Smith, clerk, paid..... \$84 50
June 30. " " " " " " 146 00
210 50

V.—On Account of Diploma Fees.

1887.
Oct. 25. To Nellie Daily, paid..... \$1 00
Dec. 6. " W. H. Smith, clerk, paid..... 6 00
1888.
June 30. " " " " " " 342 00
349 00

VI.—On Account of Sundries.

Feb. 9. To Interest on deposits..... \$170 71
" 13. " Insurance premium returned..... 25 94
June 6. " Interest on deposits..... 105 33
301 98

Total current expense..... \$49,023 65

II.—BUILDING AND SPECIAL PURPOSES.

I.—On Account of Library.

1887.
July 1. To balance on hand from last quarter..... \$435 34
Sept. 30. " Transferred from current expense..... 500 00
Dec. 31. " " " " " " 450 00
1888.
Feb. 8. " " " " " " 500 00
June 23. " " " " " " 500 00
\$2,385 34

II.—On Account of Building Additions.

1887.
Aug. 9. To State Treasurer's check No. 25531..... \$10,000 00
Dec. 15. " " " " " " 27491..... 15,625 00
1888.
Feb. 8. " " " " " " 28567..... 10,000 00
June 6. " " " " " " 30168..... 10,000 00
45,625 00

III.—On Account of Heating Apparatus.

1887.
Sept. 16. To State Treasurer's check No. 25773..... 4,375 00

Total building and special..... \$52,385 34
Total debits for all purposes..... \$101,418 99
Deduct transfers..... 1,960 00
Total received..... \$99,458 99

PUBLIC INSTRUCTION.

EXHIBIT III.—Continued.

CR.

I.—On Account of Current Expenses.

Date.	No. of Voucher	To Whom Paid.	For What Purpose.	Amount.
1887.				
July 9....	71	Evening News Association.....	Adv't for coal.....	\$11 76
11....	72	Carrie H. Stanly.....	Visitor.....	27 60
15....	73	Drury & Taylor.....	Hardware.....	83
20....	74	Michigan Bell Telephone Co.....	Rent of line.....	2 45
20....	75	Telephone & Tel. Const. Co.....	Rent of phone.....	12 00
20....	76	Ypsilanti Gas Co.....	Lights.....	4 60
20....	77	".....	".....	11 80
20....	78	Ypsilanti Postoffice.....	Postage.....	66 00
20....	79	Fanny H. Wood.....	Salary.....	5 00
Aug. 1....	80	James H. Taylor.....	Hauling coal.....	125 55
1....	81	S. S. Babcock.....	Services as Treasurer.....	156 87
July 27....	82	E. H. Green.....	Salary.....	21 00
30....	83	James A. Baily.....	".....	35 00
30....	84	C. C. Vroman.....	Salary, etc.....	60 75
Aug. 17....	85	F. K. Rexford & Sons.....	Coal.....	1,757 70
16....	86	Frederick E. Brandis.....	Mounting wires.....	5 95
31....	87	E. H. Green.....	Salary.....	18 00
Sept. 3....	88	John Bibb.....	Cleaning vaults.....	8 00
8....	89	C. C. Vroman.....	Salary.....	60 00
8....	90	Jas. H. Baily.....	".....	35 00
8....	91	J. M. B. Sill.....	Expenses and sundries.....	35 08
5....	92	Warren H. Smith.....	Salary.....	18 00
16....	93	Detroit Electrical Works.....	Repairing elect. wks.....	2 77
16....	94	Educational Supply Co.....	Apparatus, etc.....	61 91
16....	95	C. Hennecke & Co.....	Cast.....	25 89
16....	96	Robt. Curtis.....	Repairing blk. boards.....	3 50
16....	97	Tribune Printing Co.....	Advertising school.....	5 20
16....	98	Evening News Association.....	".....	10 50
16....	99	Detroit Free Press.....	".....	5 60
16....	100	Detroit Evening Journal Co.....	".....	4 90
10....	101	Darling, Brown & Sharp.....	Apparatus.....	4 05
30....	102	Pay roll for September, 1887.....	Salary.....	3,512 00
30....	103	Peninsular Paper Co.....	Paper.....	16 40
Oct. 25....	104	W. W. Worden.....	Repairs to blk. boards.....	8 00
25....	105	Folmore & Scoville.....	Lumber for repairs.....	6 84
25....	106	Coe Bros.....	Printing and supplies.....	22 44
25....	107	Walter Hewett.....	Tuning piano.....	5 00
25....	108	Archib Foster.....	Diploma fee returned.....	3 00
25....	109	The Richmond & Backus Co.....	School supplies.....	12 60
25....	110	Michigan Bell Telephone Co.....	Messages.....	65
25....	111	Telephone & Tel. Const. Co.....	Rent of telephone.....	12 00
25....	112	Drury & Taylor.....	Repairing conductors.....	34 28
25....	113	Frank Smith.....	School supplies.....	33 85
31....	114	Pay roll for October.....	Salary account.....	3,512 00
Nov. 22....	115	James W. Queen & Co.....	Apparatus.....	22 50
22....	116	The Richmond & Backus Co.....	Ink.....	2 00
22....	117	The Peninsular Paper Co.....	Paper.....	4 08
24....	118	H. N. Jenner.....	Yaggy's Anatomical Studies.....	25 00
30....	119	Pay roll for November.....	Salary account.....	3,512 00
Dec. 14....	120	Henry Ferguson.....	Extra labor.....	5 00
14....	121	C. N. Ellis.....	Lumber and labor repairs.....	80 29
31....	122	Detroit Electrical Works.....	Repairs in bell wire.....	1 15
14....	123	Ward & Howell.....	Apparatus.....	33 85
14....	124	Chas. A. Strelinger & Co.....	".....	8 50
14....	125	Carl Schovenhef.....	".....	3 14
14....	126	Educational Supply Co.....	".....	82 90
14....	127	James W. Queen & Co.....	".....	11 75
14....	128	J. M. B. Sill.....	Express, etc.....	14 15
31....	129	Pay roll for December.....	Salary account.....	3,538 00
31....	130	Coe Bros.....	Blank forms.....	5 40
31....	131	W. C. Stevens.....	Stove rental, etc.....	27 46

EXHIBIT III.—Continued.

Date.	No. of Voucher	To Whom Paid.	For What Purpose.	Amount.
1887.				
Dec. 31.....	132	The Peninsular Paper Co.....	Paper.....	\$46 08
31.....	133	Ypsilanti Postoffice.....	Postage.....	21 00
31.....	134	Telephone & Tel. Const. Co.....	Rent of 'phone.....	12 00
31.....	135	F. A. Norton.....	Museum.....	13 00
31.....	136	McEkheran & McAndrews.....	".....	9 00
31.....	137	F. R. Rexford & Sons.....	Coal.....	43 69
31.....	138	Frank Smith.....	School supplies.....	9 70
31.....	139	A. W. Kenny.....	Repairs to windows, etc.....	51 16
31.....	140	E. A. Strong.....	Apparatus.....	4 60
31.....	141	Drury & Taylor.....	".....	6 75
31.....	142	Detroit Metal & Heating Works.....	Steam pump.....	180 00
31.....	143	Eberbach & Son.....	Chemicals.....	11 12
31.....	144	James W. Queen & Co.....	Apparatus.....	252 90
31.....	145	The Educational Supply Co.....	".....	72 85
31.....	146	Bausch & Lomb Optical Co.....	Microscope.....	204 04
31.....	147	A. H. Andrews & Co.....	Apparatus.....	30 00
31.....	148	Chas. A. Strelenger & Co.....	".....	1 92
31.....	149	Bausch & Lomb Optical Co.....	".....	11 75
31.....	150	James M. Southwick.....	Museum.....	1 08
31.....	151	Lucy A. Osband.....	".....	75
31.....	152	Ypsilanti Gas Co.....	Gas.....	34 00
31.....	153	S. S. Babcock.....	Treasurer's salary.....	200 00
31.....	154	James W. Queen & Co.....	Apparatus.....	158 68
31.....	155	Eberbach & Son.....	Chemicals.....	76 23
31.....	156	".....	".....	11 21
31.....	157	".....	".....	15 45
31.....	158	".....	".....	8 35
31.....	159	".....	".....	5 35
31.....	160	".....	".....	13 05
31.....	161	".....	".....	5 48
31.....	162	Henry Ward.....	Museum.....	53 00
31.....	163	Union School Furniture Co.....	Training School App.....	13 28
31.....	164	H. R. Pattengill.....	Printing.....	8 00
31.....	165	Detroit Metal & Heating Works.....	Alterations and repairs.....	850 00
31.....	166	C. B. Hall.....	Visitors' fees and exps.....	11 90
31.....	167	Walter Hewett.....	Tuning piano.....	5 00
31.....	168	Homer Briggs.....	Freight and cartage.....	23 41
31.....	169	Ypsilanti Gas Co.....	Gas.....	9 80
31.....	170	Swift & Van Gulson.....	Erasers.....	15 00
31.....	171	The Richmond & Backus Co.....	Cyclostile.....	2 00
31.....	172	B. H. Van Vleck.....	Museum.....	25 00
31.....	173	C. J. Maynard & Co.....	".....	10 64
31.....	174	Michigan Paper Box Co.....	".....	4 25
31.....	175	B. Westerman & Co.....	Apparatus.....	18 00
31.....	176	Henry A. Ward.....	Museum.....	6 00
31.....	177	James M. Southwick.....	".....	4 25
31.....	178	Dudley & Fowle.....	Furniture.....	79 00
31.....	179	John Bibb.....	Extra labor.....	60 00
31.....	180	The Richmond & Backus Co.....	Supplies.....	11 00
31.....	181	Lansing Iron & Engine Works.....	Part pay on boilers.....	1,400 00
31.....	182	John Bibb.....	Moving coal.....	75 00
31.....	183	Dean Bros.....	Repairing stone work and steps.....	1,385 00
31.....	184	C. F. Enders.....	Museum.....	15 00
31.....	184½	James B. Palmer.....	Extras on boiler house.....	215 00
31.....	184½	Det. Metal & Heating Works.....	Covering steam pipes.....	225 00
31.....	184½	".....	Repairing pipes & valves.....	142 37
1888.				
Feb. 1.....	185	The Ypsilantian.....	Printing.....	3 50
1.....	186	January pay roll.....	Salaries.....	3,537 00
1.....	187	King, Clough & Co.....	Furniture.....	8 75
8.....	188	The Richmond & Backus Co.....	Supplies.....	4 00
8.....	189	W. H. Smith.....	Freight and express.....	2 75
8.....	190	C. King & Son.....	Alterations and repairs.....	2 15
.....	191	A. W. Kenny.....	Museum.....	2 40

PUBLIC INSTRUCTION.

EXHIBIT III.—Continued.

Date.	No. of Voucher	To Whom Paid.	For What Purpose.	Amount.	
1888.					
Feb. 8	192	Bausch Lomb Optical Co.	Museum	\$22 50	
8	193	Ward & Howell	"	10 00	
23	194	John Bibb	Extra labor	6 80	
23	195	Ypsilanti Gas Co.	Lights	7 85	
26	196	J. M. B. Sill	Museum	4 95	
23	197	Ypsilanti Gas Co.	Lights	20 40	
23	198	H. R. Pattengill	Advertising	25 00	
23	199	The Richmond & Backus Co.	Supplies	1 50	
23	200	J. M. B. Sill	Sundries	19 85	
29	201	February pay roll	Salaries	3,537 00	
Mar. 23	202	Hilda Lodeman	Diploma names	5 00	
23	203	A. H. Andrews & Co.	Expen. to Ypsi. & Chi.	16 00	
23	204	J. M. Ballou	Museum	1 50	
23	205	Frank Norton	"	12 10	
23	206	Ypsilanti Gas Co.	Lights	52 80	
23	207	T. R. Rayl & Co.	Apparatus	5 00	
23	208	Homer Briggs	Freight and express	5 61	
23	209	W. C. Stevens	Alterations and rep'rs	45 83	
23	210	F. K. Rexford & Sons	Fuel	61 88	
23	211	Frank Smith	Supplies	35 05	
23	212	O. E. Thompson	Alterations and rep'rs	9 37	
31	213	March pay roll	Salaries	3,537 00	
31	214	L. D. Norris	Board of visitors	43 66	
April 7	215	C. D. Stuart	Museum	19 80	
15	216	John Bibb	Extra labor	8 75	
21	217	Serle & Van Sickle	Repairing piano	64 85	
24	218	S. H. Dodge	Apparatus	2 00	
24	219	John Bibb	Extra labor	11 10	
24	220	The Richmond & Backus Co.	Supplies	23 10	
24	221	J. M. B. Sill	Organ repairs	8 00	
24	222	Johnson & Son	" "	74 30	
24	223	Ypsilanti Postoffice	Postage	10 00	
24	224	Tel. & Telo. Const Co.	Rent of 'phone	12 00	
24	225	The Richmond & Backus Co.	Supplies	6 00	
24	226	J. M. B. Sill	Freight and express	9 90	
24	227	Walter Hewett	Organ	6 00	
24	228	Ypsilanti Gas Co.	Lights	32 10	
24	229	Frank Smith	Supplies	16 99	
24	230	B. Westerman & Co.	Apparatus	76 63	
30	231	Pay roll for April	Salaries	3,537 00	
May 30	232	Dean Bros.	Alterations and rep'rs	300 00	
10	233	A. G. Lindsay, agent	Insurance	50 00	
21	234	Van Leyen & Co.	Contingent	55 00	
26	235	Ypsilanti Gas Co.	Lights	26 40	
26	236	Calvert Lith. and Engraving Co.	Diplomas	93 75	
26	237	John Bibb	Extra labor	4 55	
31	238	Pay roll for May	Salaries	3,537 00	
31	239	Geo. T. Pencil	Alterations and rep'rs	2 75	
June 6	240	Ypsilanti Postoffice	Postage	25 00	
6	241	F. K. Rexford & Sons	Fuel	95 78	
30	242	Ypsilanti Gas Co.	Lights	22 00	
30	243	Pay roll for June	Salaries	3,537 00	
30	244	Van Leyen & Co.	Contingent	1 50	
30	245	W. C. Stevens	"	24 20	
30	246	Walter Hewett	Piano and organ	8 00	
30	247	Detroit Tribune Co.	Advertising	50 00	
30	248	Frank A. Norton	Museum	5 50	
30	249	Peninsular Paper Co.	Supplies	12 64	
30	250	Frank Smith	"	18 45	
30	251	Coe Bros.	Supplies and printing	56 00	
30	252	Smith & Osband	Printing	301 19	
30	253	S. S. Babcock	Salary of treasurer	200 00	
30	254	Ladies' Library Association	Alumni dinner	175 00	
30	255	Normal News	Advertising	25 00	
					\$46,823 57

EXHIBIT III.—Continued.

Date.		Amount.	
1887.			
Sept. 30	By Transferred to Library fund.....	\$500 00	
Dec. 31	" " " " "	450 00	
1888.			
Feb. 8	" " " " "	500 00	
June 23	" " " " "	500 00	
			\$1,950 00
	Total current expense.....		\$48,778 57

II.—ON ACCOUNT OF BUILDING AND SPECIAL PURPOSES.

Date.	No. of Voucher	To Whom Paid.	Amount.	
		1.—On Account of Library.		
1887.				
July 15	14	Coe Bros.....	\$6 05	
Sept. 30	15	Florence Goodison.....	6 00	
Oct. 25	29	Smith & Powers.....	29 05	
Nov. 22	33	John L. Atwater.....	6 00	
Dec. 9	41	Littell & Co.....	10 50	
18	43	B. Westerman & Co.....	99 00	
14	44	Isaac N. Demmon.....	85 95	
16	45	D. Appleton & Co.....	18 00	
15	48	B. Westerman & Co.....	11 76	
31	50	John MacFarlane.....	1,110 00	
1888.				
Jan. 19	54	Frank Smith.....	3 50	
17	55	The Detroit News Co.....	48 83	
Feb. 23	60	B. Westerman & Co.....	10 62	
Apr. 24	65	B. Westerman & Co.....	4 16	
24	66	John MacFarlane.....	33 40	
24	67	I. P. Index.....	1 00	
30	68	F. W. Christlens.....	8 10	
May 3	69	J. C. Chilton.....	6 00	
21	73	John MacFarlane.....	24 67	
June 19	76	Houghton, Mifflin & Co.....	82 50	
23	77	D. Appleton & Co.....	6 00	
				\$1,562 09
		2.—On Account of Building Additions.		
Sept. 3	15	John Bibb.....	60 00	
15	16	John Bibb.....	50 00	
15	17	Charles Muschatt.....	14 00	
16	18	Detroit Evening Journal Co., advertisement.....	3 50	
16	19	Evening News Association, advertisement.....	10 08	
16	20	Tribune Printing Co., advertisement.....	6 60	
30	20½	John Bibb.....	40 00	
30	21	James B. Palmer.....	500 00	
30	23	Arthur B. Cram.....	28 00	
Oct. 21	24	David Edwards.....	48 30	
21	25	The Detroit Free Press.....	6 72	
25	26	Annie E. White.....	5 00	
25	27	Octavia Daniels.....	2 50	
24	28	Hess & Raseman.....	600 00	
25	30	E. C. Warner.....	75	
25	31	C. King & Son.....	1 40	
Nov. 22	32	James B. Palmer.....	600 00	
22	34	Dean Bros.....	3,014 78	
22	35	O. E. Thompson.....	40 90	
22	36	John Bibb.....	11 70	
22	37	W. J. Wray.....	34 40	
22	38	Lansing Iron and Engine Works.....	1,000 00	
22	39	David Edwards.....	58 00	
23	40	James B. Palmer.....	1,200 00	

EXHIBIT III.—Continued.

Date.	No. of Voucher	To Whom Paid.	Amount.	
Dec. 7....	42	James B. Palmer.....	\$400 00	
Dec. 14....	46	David Edwards.....	52 00	
14....	47	Dean Bros.....	10,211 90	
31....	49	John Bibb.....	2 85	
31....	51	David Edwards.....	86 00	
1888.				
Jan. 11....	53	Dean Bros.....	5,698 23	
26....	56	Lansing Iron and Engine Works.....	600 00	
28....	57	John Bibb.....	9 05	
Feb. 7....	58	D. Edwards.....	54 00	
25....	59	Lansing Iron and Engine Works.....	1,149 06	
Mar. 10....	61	D. Edwards.....	50 00	
14....	62	Dean Bros.....	1,004 70	
Apr. 12....	63	Dean Bros.....	2,707 25	
15....	64	D. Edwards.....	54 00	
May 9....	70	Dean Bros.....	5,200 80	
9....	71	Hess & Raseman.....	200 00	
10....	72	D. Edwards.....	51 90	
June 6....	74	D. Edwards.....	54 00	
19....	75	Dean Bros.....	3,080 00	
				\$37,943 87
		3.—On Account of Heating Apparatus.		
1887.				
Dec. 31....	53	Detroit Metal and Heating Works.....		1,350 00
		Total building and special purposes.....		\$40,855 96
		Total for all purposes.....	\$37,679 53	
		Balance to new account.....	11,784 46	\$99,463 99

EXHIBIT IV.—Abstract of Inventory of property belonging to the Michigan State Normal School.

5 935-1000 acres of land.....	\$7,500 00
One brick building, used for conservatory.....	8,000 00
Main Normal School building.....	145,000 00
Boiler house.....	2,000 00
Two outhouses.....	1,500 00
Library of 9,383 volumes.....	15,500 00
Furniture from old Library.....	75 00
Furniture in new Library, viz.:	
Five long tables—felt top.....	600 00
Five dozen chairs.....	
Half dozen oak chairs—cane seats.....	
Half dozen oak stands.....	
256 square yards Linoleum floor.....	230 90
One organ.....	3,000 00
One Reed organ.....	90 00
One Reed organ.....	75 00
One Grand piano.....	650 00
One square piano.....	200 00
One upright piano.....	200 00
One piano.....	175 00
One piano.....	85 00
Models for drawing.....	25 00
Maps and pictures.....	300 00
Charts.....	100 00
Globes.....	25 00

STATE BOARD OF EDUCATION.

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PHYSICAL SCIENCE DEPARTMENT.

Apparatus pertaining to astronomy.....	\$707 00
" " " mechanics.....	557 00
" " " acoustics.....	161 75
" " " heat.....	44 55
" " " optics, inc. microscopy.....	320 46
" " " magnetism and electricity.....	424 10
" " " meteorology.....	72 00
Apparatus, chemical.....	208 45
Chemicals.....	78 60
Tools.....	138 00

NATURAL SCIENCE DEPARTMENT.

Cases and fixtures.....	400 00
Charts, models, busts.....	149 50
Mammals, birds, fossils, minerals, etc.....	2,202 66
Surveying instruments.....	300 00
Desks, chairs, tables, recitation seats and other school furniture.....	\$5,288 20
572 opera chairs in chapel.....	1,200 00
New furniture in Miss King's room, viz.: One sofa, four chairs, table spread, two rugs, etc.....	150 00
Matting and carpets.....	500 00
Clocks and electric bells.....	50 00
Gas fixtures.....	1,027 45
Boilers, 3—16 feet long, 5 foot shell.....	\$4,100 00
Boiler, 1—13 feet long, 4 foot shell.....	900 00
One steam pump.....	185 00
Tools for steam fitting.....	28 00
Tools in boiler house.....	32 95
Fifty-six boxes crayon.....	5 60
Stationery.....	74 40

TRAINING SCHOOL.

Anatomical apparatus.....	47 00
Pamphlet cases, etc.....	12 00
Reading apparatus.....	57 00
Object work apparatus.....	88 75
Kindergarten apparatus.....	18 52
Scales and measures.....	27 00
Text books.....	47 70
Drawing apparatus.....	21 00
Penmanship.....	4 00
Music.....	23 25
Maps and globes.....	68 00
Total.....	\$204,009 79

PUBLIC INSTRUCTION.

Credits.	Library.	Heating App- paratus.	Building Addi- tions.	Total of Build- ing, Special, etc.	Current Ex- penses.	Aggregate.
By Balance (on hand), Oct. 1, 1886.....	\$405 70	.....	.....	\$405 70	\$339 02	\$774 72
Cash from State Treasury during year.....	.....	\$4,375 00	\$10,000 00	14,375 00	41,460 02	55,835 02
Cash from earnings of Institution during year.....	.....	.....	.....	.....	3,836 50	3,836 50
Cash from other sources during year.....	.....	.....	.....	.....	28 43	28 43
Transfer (between funds)—to library.....	1,050 00	.....	.....	1,050 00	.....	1,050 00
Total available during year ending Sept. 20, 1887.....	\$1,455 70	\$4,375 00	\$10,000 00	\$15,830 70	\$45,693 97	\$61,524 67
Footings.....	\$1,455 70	\$4,375 00	\$10,000 00	\$15,830 70	\$45,693 97	\$61,524 67
Debits.						
To Disbursements (exclusive of loans paid).....	\$532 41	.....	\$709 18	\$1,241 59	\$39,542 93	\$40,784 53
Transfer (between funds)—from current expense.....	.....	.....	.....	.....	1,050 00	1,050 00
Total Debits during year.....	\$532 41	.....	\$709 18	\$1,241 59	\$40,592 93	\$41,834 52
To balance (on hand) to new account.....	923 29	\$4,375 00	9,290 82	14,589 11	5,101 04	19,690 15
Footings.....	\$1,455 70	\$4,375 00	\$10,000 00	\$15,830 70	\$45,693 97	\$61,524 67

STATE OF MICHIGAN, in Account with S. S. Babcock, Treasurer of State Normal School, for the year ending Sept. 30, 1888.

STATE BOARD OF EDUCATION.

Credits.		Library.	Seating and Furnishing.	Heating Apparatus.	Building Additions.	Total Building and Special.	Current Expenses.	Aggregate.
By Balance (on hand) Oct. 1, 1888.....		\$233 29	.....	\$4,375 00	\$9,380 82	\$14,539 11	\$5,101 04	\$19,630 15
Cash from State Treasury during year.....		.....	\$4,175 00	.....	41,450 00	45,625 00	42,377 44	87,902 44
Cash from earnings of Institution during year.....		.....	.....	.....	.....	.....	6,817 00	6,817 00
Cash from other sources during year.....		.....	.....	.....	.....	.....	301 98	301 98
Transfer (between funds)—to library.....		1,950 00	.....	.....	.....	1,950 00	.....	1,950 00
Total available during year ending Sept. 30, 1888.....		\$2,873 29	\$4,175 00	\$4,375 00	\$50,740 82	\$62,164 11	\$54,497 46	\$116,661 57
Footings.....		\$2,873 29	\$4,175 00	\$4,375 00	\$50,740 82	\$62,164 11	\$54,497 46	\$116,661 57
Debits.								
To Disbursements (exclusive of loans paid).....		\$1,611 29	\$3,015 60	\$3,185 00	\$48,510 70	\$56,322 59	\$47,740 85	\$104,063 41
Transfer (between funds)—from current expense.....		.....	.....	.....	.....	.....	1,950 00	1,950 00
Total debits during year ending Sept. 30, 1888.....		\$1,611 29	\$3,015 60	\$3,185 00	\$48,510 70	\$56,322 59	\$49,690 85	\$108,013 44
To balance (on hand) to new account.....		1,262 00	1,159 40	1,190 00	2,230 12	5,841 52	4,808 61	10,643 18
Footings.....		\$2,873 29	\$4,175 00	\$4,375 00	\$50,740 82	\$62,164 11	\$54,497 46	\$116,661 57

QUESTIONS USED AT THE EXAMINATION FOR STATE TEACHERS' CERTIFICATES,

HELD AT LANSING, DECEMBER 26, 27 AND 28, 1888.

ARITHMETIC.

1. My gain this year is \$1,500, which is 75 per cent. of my gain last year, and that was 125 per cent. of my gain the year before. What was my gain last year and the year before?
2. The difference between the simple and annual interest for three years at 7 per cent. is \$22.47. What is the principal?
3. The length of a rectangular field of twenty acres is twice its breadth. What is the distance around it?
4. Reduce $\frac{9}{24}$ to a decimal fraction.
5. A druggist bought opium at avoirdupois weight and sold it at apothecary's weight. What was the gain per cent.?
6. A tradesman marks an article \$5, but sells it for 8 per cent. less for cash. If his profit was 15 per cent., what was the cost?
7. Show that the greatest common divisor of two numbers must be the less number or the difference between the numbers, or some factor of the difference.
8. What is the net cost of a box of glass listed at \$8, with 60, 10 and 5 per cent. discount?
9. What is the diameter of a globe whose volume is 64 times the volume of one 7 inches in diameter?
10. What is the first step in teaching numbers?

ALGEBRA.

1. The sum of 5 numbers in arithmetical progression is 35, and the sum of the squares is 385; find the numbers.
2. A purse holds 19 crowns and 6 guineas, 4 crowns and 5 guineas fill $\frac{17}{63}$ of it. How many of each will it hold?
Given— $5x - 4y + 2z = 48$,
 $3x + 3y - 4z = 24$,
 $2x - 5y + 3z = 19$.
3. Solve by substitution.

4. Solve by comparison.
5. Solve by addition and subtraction.
6. Find the cube root of.
7. Divide 19 and 29, each into two parts so that the difference of the squares of the first parts of each may be 72, and the difference of the squares of the remaining parts of each is 144.
8. Find the equation whose roots are each more by three than the roots of $x^2 - 27x - 36 = 0$.
9. What number is that whose $\frac{1}{2}$ increased by its $\frac{1}{6}$ is equal to its $\frac{11}{20}$ diminished by $\frac{2}{15}$?
10. The sum of two numbers is 8, and the difference of their cubes is 98. What are the numbers?

GEOMETRY.

1. *Theorem*: The sum of any two sides of a triangle are greater than the third side.
2. *Theorem*: From a given point one perpendicular can be drawn to a given straight line.
3. *Theorem*: In equal circles, a greater arc is subtended by a greater chord; and conversely a greater chord subtends a greater arc.
4. *Theorem*: An angle formed by two secants is measured by half the difference of the included arcs.
5. *Theorem*: The square described on the sum of two lines is equal to the sum of the squares described on the lines, increased by twice the rectangle of the lines.
6. *Theorem*: Triangles which have a line equal are to each other as the rectangles of the included sides.
7. *Theorem*: If a line is perpendicular to a plane, every plane passed through the line will also be a perpendicular to that plane.
8. *Theorem*: The area of a spherical triangle is equal to its spherical excess multiplied by a trirectangular triangle.
9. *Problem*: To circumscribe a polygon about a circle which shall be similar to a regular inscribed polygon.
10. Through a given point in a given angle to draw a line so that the segment between the point and the sides of the angle shall be equal.

GRAMMAR.

1. Name some of the most important results to be secured by the study of English Grammar.
2. What is gained by formal parsing?
3. Write out in full your order of parsing a noun, pronoun, verb, adjective, adverb, participle.
4. What use can be made of diagrams?
5. Give your method of diagraming in the use of a complex sentence of your own construction.
6. It is *natural for man to indulge* in the illusions of hope; (1) analyze, and (2) parse emphatic words.
7. Write the synopsis of the following verbs: lie (to recline), sit, heave.
8. Give all the uses of "what."
9. " " " " " " "that."
10. Give an outline of your method of teaching language lessons.

LITERATURE.

1. Name and define the periods of English literature.
2. What can you say of the poetical writings of Spenser?
3. Name three distinguished writers of the Elizabethan period and three of the masterpieces of each.
4. Give some account of Lord Byron and three of his most renowned productions.
5. What is the true aim of the novel? Name five of the most distinguished novelists of this century and the masterpiece of each.
6. Who constituted the Lake school and what has been their influence on literature?
7. In what does Milton's pre-eminence consist? Quote some passage from *Paradise Lost* and give a brief criticism of the same.
8. Name five distinguished American poets, orators, Historians, essayists, and give their best works.

RHETORIC.

1. Define style and name three elements.
2. Name and define four qualities of style.
3. Name and define five kinds of composition.
4. Give and illustrate by examples three figures of speech.
5. In what respects do prose and poetry differ?
6. What are the requisites of a good description?
7. Give the parts of an oratorical discourse.
8. What should the exordium contain, and what relation should it bear to the body of the speech?
9. Name some of the characteristics of oratorical style.
10. Write a brief argument for or against the township system of schools.

GEOGRAPHY.

1. Name the principal lines of railroads, lying wholly within the United States between Detroit and New York, Detroit and San Francisco, Chicago and St. Paul, New York and New Orleans.
2. Which is the most direct all water route from Detroit to Calcutta?
3. Name and locate the course of the prevailing winds of the Atlantic Ocean.
4. Name and describe the principal currents of the Pacific Ocean.
5. What changes have been made in the political geography of Europe since 1850, and what was their cause?
6. What would be the effect upon the climate of the United States were the Rocky Mountains to be removed?

UNITED STATES HISTORY.

1. State briefly the prominent events connected with the discovery and settlement of America by the Spaniards, French and English.
2. Write an outline of the history of slavery in America, from its origin to its close.
3. What can you say of the foreign element in the war of the Revolution with regard to the Hessians? The French alliance? Volunteer officers?
4. What can you say of the growth of the modes of communication since the Revolution?

5. Give an account of the connection of one of the following with the war for the preservation of the Union : Sheridan, W. T. Sherman, U. S. Grant.

6. What can you say of the foreign relations of the United States during the Civil War ?

7. What can you say of the rise, principles and leaders of the political parties in the United States ?

8. Describe the question of the right of the territories to admission on their having sufficient population for a State ; with reference to current issues.

9. Write an outline sketch of the administration of Grover Cleveland.

10. What are the principal industrial and political issues now before the people ?

GENERAL HISTORY.

1. Into what general periods is history usually divided? When does each begin and end ?

2. Name the principal causes leading to the downfall of the Roman Empire.

3. Give a brief sketch of the rise, conquests and fall of the Saracens.

4. Outline the rise of Spain to power, and the steps by which she reached her present inferior position.

5. Briefly outline the steps by which the Kingdom of England rose to the present British Empire.

6. Outline briefly the history of the government of France since the revolution.

7. What can you say of the rise and progress in power of the Russian Empire ?

8. What is Federal Union? What can you say of attempts successful and unsuccessful to form such union in Greece, Rome and in nations of Teutonic origin ?

CIVIL GOVERNMENT.

1. Define liberty; a general law; a private law.

2. Define nation; state; government.

3. What advantages does an absolute monarchy possess which a republic like ours does not ?

4. Why should the heads of departments and their subordinates be appointed rather than elected ?

5. What is the chief benefit derived from a constitution? Why ?

6. What are direct taxes; what indirect ?

7. Why should the State control banks and banking ?

8. What is meant by Eminent Domain ?

9. What advantages are enjoyed by the people of a State of the United States which are not enjoyed by those of one of the Territories ?

10. When was the present constitution of Michigan adopted ?

THEORY AND ART OF TEACHING.

1. Describe your method of primary reading.

2. Describe your method of advanced reading.

3. What is a graded school? Its advantages as compared with an ungraded one ?

4. Give five principles involved in grading a school.

5. Name some principles that should determine punishments in school.

6. Should corporal punishment ever be inflicted in school? Give reasons for or against.

PUBLIC INSTRUCTION.

7. Define education ; what is the true end to be attained ?
8. Name three prevailing errors in school management.
9. Name three prevailing errors in conducting recitations.
10. Give an outline of the mental faculties.]

PHYSICS.

1. Define inertia; elasticity; density; porosity.
2. Name, define, and give examples of the different kinds of motion.
3. Define weight; equilibrium.
4. How would you determine the specific gravity of olive oil, before a class ?
5. How is sound produced? Explain its transmission in solids; in liquids.
6. What is heat? How is a thermometer made?
7. Define fusion; freezing; expansion; evaporation.
8. What is light; vision; refraction ?
9. Explain the structure of an electro-magnet.
10. Describe the process of electrotyping.

PHYSIOLOGY AND HYGIENE.

1. Describe the skin and its functions.
2. What are the differences between the arteries and veins, both as regards structure and uses?
3. Describe the nervous system.
4. Describe the mechanism of respiration.
5. What is the composition of the vital food stuffs? Why?
6. How do we see ?
7. How do bones grow?
8. What methods are best to secure proper ventilation ?
9. Why does exercise increase the temperature?
10. Is the use of alcohol injurious to animal life and why ?

BOTANY.

1. Describe the process of germination.
2. Give the characteristics of the order Sequinmosa.
3. What is an order, a genus, a species?
4. What is necessary to the healthy growth of plants?
5. Describe the process of analyzing plants.
6. Explain the manner of circulation of sap in plants.
7. Name the parts of the flower and give the office of each.
8. Describe the umbelliferae and give examples.
9. Give a general description of flowerless plants.
10. Give your method of making an herbarium.

ZOOLOGY.

1. Describe animal life. How does it differ from vegetable life ?
2. Name and describe insects that are injurious to fruit.
3. Describe the metamorphosis of an insect.

4. Give examples of animals which are specially provided with means of defense.
5. Describe the Batrachians. Give examples.
6. What are the characteristics of true reptiles?
7. How is a mammal distinguished from a bird?
8. Give ten examples of the vertebrate.
9. Describe the molting process of snakes.
10. Into what general groups is the human race divided?

GEOLOGY.

1. Name and give the constituents of the most common silicates.
2. Name and describe the principal igneous rocks.
3. Define the terms, strike; fault; geosynclinal.
4. Name the divisions of Paleozoic time, and give the chief characteristics which distinguish each division.
5. What were the chief disturbances in North America at the close of Paleozoic time?
6. What was the principal rock formation of the Reptilian age, and where does it occur most abundantly in North America?
7. To what geologic age do the Michigan salt formations belong?
8. Which were first in order of time, the iron ore deposits or the salt deposits of Michigan? Why?

CHEMISTRY.

1. How do you know an acid from an alkali?
2. Explain the process of distillation.
3. State the nature and causes of fermentation.
4. How can you determine the atomic weight of Chlorine?
5. What are the products of the burning of the candle?
6. What is Ag NO_3 , $\text{Na}_2 \text{O}$, H Na CO_3 ?
7. Show that O is not the only supporter of combustion.
8. Describe the blast furnace.
9. Show how Na_2 , SO_2 + C_4 = Na_2 , S + CO .
10. By what process do plants prepare food for man?

SCHOOL LAW.

1. Why does the law requires teachers to be licensed?
2. What is the source from which the "mill money," so-called, is derived?
3. What are the duties of a school board?
4. Whence does the teacher derive his powers?
5. Has a teacher a right, inherent to his position, to inflict corporal punishment?
6. Has the State a right to compel a parent to send a child to school, without furnishing the child all the appliances of study, including books? Why?
7. What control may a teacher exercise over a pupil when not on the school premises?

MICHIGAN SCHOOL FOR THE BLIND.

REPORT OF THE SUPERINTENDENT.

To the Board of Control of the Michigan School for the Blind :

GENTLEMEN—Herewith is submitted the report of the superintendent of the institution in your care for the biennial period covered by the school years of 1886-7 and 1887-8:

LITERARY DEPARTMENT.

The vacancy caused by the declination of Miss Emma L. Kent to re-engage at the close of year of 1887 was filled by the appointment of Miss Minnie S. Larwill, of Adrian, at the opening of the term in September, '87.

Mr. Owen L. Miller, of Plymouth, was engaged to do special work with the blind, deaf mute, Reuben Asline, and with two boys, Loren Gates and Frank Demorest, who are very deaf, and also to do regular work in the school.

STUDIES.

Following is a list of the studies pursued by the various grades for the years of 1886-7 and 1887-8:

First Grade.

School year ending June 30, 1887.—General Knowledge, Geometry, Rhetoric, Philosophy.

School year ending June 30, 1888.—Grammar, Civil Government, Botany, Algebra, English Literature, Geology, Political Economy.

Second Grade.

School year ending June 30, 1887.—Algebra, General Knowledge, Rhetoric, Philosophy.

School year ending June 30, 1888.—Grammar, Reading and Spelling, U. S. History, Arithmetic.

Third Grade.

School year ending June 30, 1887.—General Knowledge, Arithmetic, Geography, Literature, Reading and Spelling.

School year ending June 30, 1888.—Arithmetic, Geography, Reading and Spelling, Grammar, Memorizing.

Fourth Grade.

School year ending June 30, 1887.—Memorizing, Geography and Objects, Arithmetic, Reading and Spelling.

School year ending June 30, 1888.—Arithmetic, Geography, Reading and Spelling, Grammar, Memorizing.

Fifth Grade.

School year ending June 30, 1887.—Arithmetic, Reading and Spelling, Kindergarten, Geography, Memorizing.

School year ending June 30, 1888.—Arithmetic, Reading and Spelling, Kindergarten, portion of grade in Geography.

During the year of 1887 instruction in the foregoing subjects was given to seventy-nine (79) pupils, and during year of 1888 to seventy-nine (79) pupils.

The kindergarten training continues to give satisfaction. It aids very much in overcoming the clumsiness of hands and fingers. This clumsiness is particularly noticeable in the hand of the blind child when received at the institution. As this class of persons is so dependent upon the sense of touch the necessity for a dexterous use of the hand and fingers is apparent.

This dexterity can best be acquired in the kindergarten, at an early age, as then habits are easily formed. So there is an advantage in placing the child early in the school; hence the practice of receiving pupils at the age of six or seven years should be continued.

In the reading classes both the line and New York point systems are in use. The members of the classes started in point two years ago have become very good readers. The "point" has been introduced into some of the younger grades where pupils read both line and point with equal ease.

The pupils' libraries of embossed books consist very largely of books in the line letter point. As the books published from year to year under the congressional grant of 1879 by the American Printing House for the Blind are part in line and part in point, I advise the selection of at least as many books in point as in line.

MUSIC DEPARTMENT.

No addition of musical instruments has been made during the two years covered by this report. One, at least, of the old pianos turned over to the tuning department, is getting very much worn for regular practice in tuning. It appears to me that this should be replaced by one of the older pianos and the parts that are of service used to repair other pianos.

In this connection it seems proper to urge the necessity felt in the tuning department for an upright piano upon which the class may practice.

The upright is growing more and more into favor with the public, consequently a greater proportion of the work of the tuner will be upon this instrument.

At present the only practice which the department affords is upon our own good pianos, and of course it is not advisable, for the good of these instruments, that the class should practice upon them till they have gained considerable knowledge and skill in tuning.

This affords the class insufficient knowledge of the mechanism and peculiarities of this instrument to attain that proficiency which otherwise would be attained, and to do the institution and themselves the credit which is the foundation of success for the whole class of blind tuners.

I would therefore recommend that an upright piano be added to the tuning department.

So far as can be learned the class of tuners who left the institution at the

close of the year 1886-7 are doing creditable work. There appears to be no reason why young ladies, as well as gentlemen, should not be able to learn the art of piano tuning and practice it with success. To those who will eventually give instruction upon the piano, quite a field will open among their patrons.

I would recommend that the young ladies, who show an aptness in this direction, be given instruction in this department. The other work of the Music Department continues the same as at the time of the last biennial report.

I again renew the recommendation for an appropriation for a pipe organ. Prof. Blakeslee, the head of the musical department, heartily concurs in this recommendation, and thinks the addition of a pipe organ to the musical resources of the school of the first importance.

WORK DEPARTMENT.

In this department the girls are taught plain and fancy sewing and knitting, also the use of the sewing machine. A very large portion of the sewing for the school is done by the girls. This work includes hemming of towels, napkins, sheets, and pillow slips. Other work, such as crocheted toilet sets, canvas work, lace, fancy baskets, crocheted shawls and skirts, etc., and needle work of all descriptions is executed with neatness and precision.

The work of this department is done with commendable success and diligence upon the part of both pupils and teacher.

I suggest that if there were arrangements by which the teacher of girls' work should be relieved of a portion of the preparation and mending of household articles, that the time thus gained could be very profitably spent in giving instruction in more advanced needlework, knitting and crocheting.

In the broom shop creditable work has been done. The methods continue the same as heretofore. A number of adults have devoted all or nearly all of their time to the learning of the trade. Besides these, all of the boys of proper age and size have received instruction in the trade.

The reports that come in from those who have completed the trade, and have been or are working for themselves, are highly encouraging, and indicate that the training given is practical and profitable.

FEEBLE-MINDED.

Each year the fact that there is great need of some provision for the care of feeble-minded young persons presents itself more strongly. Among the blind of the State there are a number of persons who would be fit candidates for such an institution. It would appear that the legislature must soon recognize the necessity of providing for this class.

HEALTH.

The general health of the pupils of the institution has been good.

With the exception of one case each of diphtheria and measles, there has been no contagious disease for the two years.

The two cases referred to were brought to the institution by pupils who soon came down with the respective diseases. Prompt isolation of the patients prevented spread of the diseases.

Notwithstanding the general good health, two deaths are to be chronicled. On Dec. 27th, 1886, Pauline Schroff was taken with a fit, and, in the opinion of the attending physician, broke a blood vessel in the brain, and died. March 17th, 1888, Albert North died at the institution of acute jaundice, with spasms. His sickness lasted but two days. Both bodies were delivered to relatives for burial at Detroit. During the year 1886-7 four boys were sent to Ann Arbor for medical treatment, which was successful in part. During present month of June one boy was taken to Dr. Frothingham for advice concerning condition of eyes and ears.

ACKNOWLEDGMENTS.

Acknowledgments of the institution are cheerfully extended to the Detroit, Lansing & Northern Railway Co.; the Michigan Central Railway Co.; the Chicago & Grand Trunk Railway Co.; and the Lake Shore & Michigan Southern Railway Co., for two-thirds rates furnished for year of 1887, and for half fare rates for year of 1888. To the proprietors of the following newspapers: Flint Tri-weekly Globe; The Church Reporter; the Ingham County Democrat; the Tablet, Romney, W. Va. To the Society for Providing Religious Evangelical Literature for the Blind, for 28 copies of the International Sunday School Weekly. To ex-Governor Russel A. Alger for one hundred dollars for Christmas gifts, 1886, and for seventy-five dollars for same purpose in 1887. To Miss Mae Bishop, of Chicago, for elocutionary entertainment. To Mrs. M. A Hazlett, for address. Earnestly hoping for the welfare of the school, I have the honor to submit this report.

Very truly,

U. G. RACE,
Acting Superintendent.

Officers and Teachers.

Name.	Service.	Rate.	Residence.
U. G. Race.....	Acting superintendent.....	\$700 for 10 mo's	Resident.
Owen L. Miller.....	1st literary teacher.....	400 " " "	"
Carrie W. Norton.....	2d " "	350 " " "	"
Minnie S. Larwill.....	3d " "	250 " " "	"
Ella Rider.....	4th " "	200 " " "	"
A. C. Blakeslee.....	Teacher instrumental music.....	600 " " "	"
Alice Daily.....	" sewing and girls' work.....	400 " " "	"
M. N. Cross.....	" broom making.....	600 " 12 "	"
Mrs. A. C. Blakeslee.....	" vocal music.....	200 " 10 "	"

PUBLIC INSTRUCTION.

Enrollment.—Boys.

Names of Pupils.	Assigned Cause of Blindness.	Residence County.	Years' Attendance	
			1887	1888
Robert Roberts.....	Explosion of powder.....	Marquette.....	1887	
Frank Haun.....	Unknown.....	Houghton.....	"	1888
Fred Kurtz.....	Inflammation.....	Saginaw.....	"	"
John Tuck.....	" of brain.....	Jackson.....	"	"
Lewis Reglan.....	Unknown.....	Saginaw.....	"	"
Lester Beach.....	Accident with fork.....	Eaton.....	"	"
Albert Houghtby.....	" " a knife.....	Lenawee.....	"	"
Charlie Green.....	" " ".....	Ottawa.....	"	"
Reuben Asline.....	Typhoid fever.....	Mackinac.....	"	"
Charlie Olney.....	Congenital.....	Charlevoix.....	"	"
James Bowen.....	Exposure.....	Eaton.....	"	"
Oscar M. Wicks.....	Whooping cough and scarlet fever.....	Tuscola.....	"	"
Frank Simmons.....	Measles.....	Muskegon.....	"	"
Fred Bucknell.....	Accident.....	Livingston.....	"	"
Fred Hickman.....	Inflammation.....	St. Clair.....	"	"
Truman Perrigo.....	Accident with scissors.....	Montcalm.....	"	"
John Donohue.....	Measles.....	St. Clair.....	"	"
Wm. Holton.....	Scarlet fever.....	Clinton.....	"	"
John Foley.....	Cataract.....	".....	"	"
O. E. Oatman.....	Unknown.....	Kent.....	"	"
Phillip Raboin.....	Unknown.....	Menominee.....	"	"
Fernando Ellsworth.....	Inflammation.....	Alpena.....	"	"
George Hallack.....	Unknown.....	Genesee.....	"	"
Thad Simmons.....	Inflammation.....	Ionia.....	"	"
Fred Hoar.....	Inflammation.....	Marquette.....	"	"
A. North.....	Struck with stone.....	Wayne.....	"	"
Wm. J. Palmer.....	Paralysis of the nerve.....	Ingham.....	"	"
Dorr Rogers.....	Congenital.....	Tuscola.....	"	"
Herman Nochtwelh.....	Brain fever.....	Saginaw.....	"	"
Neil McGinnis.....	Accident with chip.....	St. Clair.....	"	"
T. Town Clark.....	Vision defective, grew worse.....	Eaton.....	"	"
Willie Rich.....	Congenital.....	Ingham.....	"	"
Orin Nichols.....	Neglect.....	Otsego.....	"	"
Loren Gates.....	Unknown.....	Oakland.....	"	"
Dean Gray.....	Inflammation.....	Sanilac.....	"	"
John Elder.....	Spotted fever.....	Jackson.....	"	"
Jos. Henretti.....	Explosion of percussion cap.....	Menominee.....	"	"
J. Perrine Hamilton.....	Accident with scissors.....	Calhoun.....	"	"
Geo. Dean.....	Doubtful.....	Berrien.....	"	"
Thomas Loague.....	Inflammation.....	Montcalm.....	"	"
Albert V. Miller.....	Scarlet fever.....	Hilledale.....	"	"
Geo. Trumble.....	Cataract.....	Saginaw.....	"	"
Kasimir Balwinsky.....	Unknown.....	Bay.....	"	"
Bernhart Wagner.....	Fits.....	Wayne.....	"	"
Wm. J. Kelly.....	Inflammation.....	St. Clair.....	"	"
Albertus Frank.....	Unknown.....	Kalamazoo.....	"	"
Joe Wood.....	Inflammation.....	Oceana.....	"	"
Henry Cox.....	Scarlet fever.....	Kent.....	"	"

Enrollment.—Boys.—Continued.

Names of Pupils.	Assigned Cause of Blindness.	Residence. County.	Years' Attend'nce	
			1887	1888
Albert Main.....	Neglect at birth.....	St. Clair.....	1887	1888
Ralph Perry.....	Inflammation.....	Ionia.....	"	"
John Hoak.....	Atrophe of the nerve.....	Kalamazoo.....	"	"
Ralph Clark.....	Explosion of gun cap and rheumatism.....	Montcalm.....	"	"
Geo. L. Donovan.....	Accident.....	Ogemaw.....	"	"
Frank Demoreet.....	Unknown.....	Mason.....	"	"
Willie Waters.....	".....	Clinton.....	"	"
Frank Kenyon.....	".....	Jackson.....	"	"
Adelbert Jordan.....	Accident with steel filings.....	Berrien.....	"	"
Lovel Bass.....	Cataract.....	Kent.....	"	"
James Running, Jr.....	Gun shot.....	Lapeer.....	"	"
Harry Miller.....	Congenital.....	Ottawa.....	"	"
G. J. Hunt.....	Explosion in mine.....	Menominee.....	"	"
John P. Smith.....	Inflammation.....	Ionia.....	"	"
Daniel Bracelin.....	Scarlet fever.....	Allegan.....	"	"
Geo. Huff.....	Granulation of lid.....	Muskegon.....	"	"
Otto Ernst.....	Scarlet fever.....	Wayne.....	"	"
Lynn Roberts.....	Ophthalmia neonati.....	Shiawasee.....	"	"
Austin O. Wilson.....	Weakness of nerve and dyphina.....	Calhoun.....	"	"
W. H. Brown.....	Accident and inflammation.....	Wayne.....	"	"

PUBLIC INSTRUCTION.

Enrollment.—Girls.

Names of Pupils.	Assigned Cause of Blindness.	Residence. County.	Years' Attendance.	
			1887	1888
Theresa Bock.....	Jaundice.....	Saginaw.....	1887	1888
Ida V. Keene.....	Congenital.....	Tuscola.....	"	"
Anna Birk.....	Opthalmia.....	Cheboygan.....	"	"
Retta Knight.....	Cerebro spinal meningitis.....	Hillsdale.....	"	"
Emma Hogan.....	Cold.....	Macomb.....	"	"
Cora Playter.....	Congenital.....	Kent.....	"	"
Maggie Keiser.....	Unknown.....	Ottawa.....	"	"
Della Moreland.....	Congenital.....	Tuscola.....	"	"
Mary Forton.....	Inflammation.....	Macomb.....	"	"
Annie DuPlanli.....	Congenital.....	Bay.....	"	"
Anna Cross.....	Congenital.....	Washtenaw.....	"	"
Minnie Cross.....	Congenital.....	Washtenaw.....	"	"
Maggie Goggins.....	Malpractice.....	Kent.....	"	"
Gertrude Wyman.....	Isiancoma.....	Macomb.....	"	"
Celia Durgan.....	Inflammation.....	Missaukee.....	"	"
Ella Rider.....	Explosion gun cap.....	Livingston.....	"	"
Tina Barkow.....	Inflammation.....	Ingham.....	"	"
Ada Hubbard.....	Unknown.....	Kalkaska.....	"	"
Kittie Simpson.....	Scarlet fever.....	Jackson.....	"	"
Anna Donaldson.....	Inflammation.....	Jackson.....	"	"
Huldah Lischnewsky.....	Conjunctivis.....	Charlevoix.....	"	"
Carrie M. Connor.....	Unknown.....	Ogemaw.....	"	"
Minnie Pickell.....	Spinal fever.....	Montcalm.....	"	"
Rosa Morgan.....	Inflammation.....	Saginaw.....	"	"
Kate Catherman.....	Congenital.....	St. Joseph.....	"	"
Mollie Catherman.....	Congenital.....	St. Joseph.....	"	"
Cornelia Kamhout.....	Typhoid fever.....	Ottawa.....	"	"
Minnie Regelin.....	Unknown.....	Ottawa.....	"	"
Jennie Sherman.....	Unknown.....	Sanilac.....	"	"
Laura Telnios.....	Inflammation.....	Saginaw.....	"	"
Carrie Leidline.....	Inflammation.....	Saginaw.....	"	"
Adeline Otto.....	Inflammation.....	Cass.....	"	"
Gussie Moyles.....	Cataract.....	Calhoun.....	"	"
Lavina Richardson.....	Paralytic shock.....	Ionia.....	"	"
Ollie Dickerman.....	Measles.....	Jackson.....	"	"
Villette M. Dell.....	Paralysis of optic nerve.....	Genesee.....	"	"
Pauline Schroff.....	Neglect at birth.....	Wayne.....	"	"
Ella Rauch.....	Scarlet fever.....	Monroe.....	"	"
Cora Farrington.....	Unknown.....	Saginaw.....	"	"
Mary Bertha Hetchler.....	Injured by drunken father.....	Livingston.....	"	"
Gracie Playter.....	Congenital.....	Kent.....	"	"
Mable Gilmore.....	Spinal meningitis.....	Washtenaw.....	"	"
Louise Schon.....	Inflammation.....	Lenawee.....	"	"
Alvilde Tryggslund.....	Unknown.....	Marquette.....	"	"
Jessie Anderson.....	Malarial fever.....	Calhoun.....	"	"
Mary Coupland.....	Paralysis.....	Genesee.....	"	"
Martha M. Philp.....	Cold.....	Huron.....	"	"
Emily Stephens.....	Whooping cough.....	Van Buren.....	"	"
Jessie L. Seaman.....	Paralysis.....	Alpena.....	"	"

MICHIGAN MINING SCHOOL.

REPORT OF THE BOARD OF VISITORS.

HON. JOSEPH ESTABROOK,
Superintendent of Public Instruction.

DEAR SIR—Having been appointed by you as a board of visitors to the Michigan Mining School for the purpose of examining into its condition, and reporting to you the results of such examination, the undersigned, in compliance both with such appointment and with the direction of the law applicable to boards of visitors, hereby submit our report:

It is to be sincerely regretted that the Hon. Theodore Nelson, who was also appointed by you, could not arrange his business so as to go with us, and give us the benefit of his observation and criticism.

We visited the school in June, and found the senior class under the immediate supervision of Director Wadsworth, hard at work among the iron mines at Ishpeming.

The work consisted in tracing and locating the geological formations and ore deposits, and determining their relations to each other. In connection with this work the students were taken into the mines and shown the practical workings of methods and machinery for mining ores. The instruction given was to the last degree thorough, and was of a nature impossible to be given by schools not located among the mines.

It was an unusual sight to see teacher and class, dressed in the garb of common laborers, with their hammers and dinner pails, specimen bags and memoranda papers at work, compelling nature to yield her secrets, instead of hunting them out of the writings of men, in the schoolroom; and it was a still stranger sight to see the same teacher and pupils start to climb, with lamp on head, down ladders, into the mines, to the depth of five and six hundred feet, and in the copper mines, much deeper; and there, in the cold and the damp and the darkness, illuminated by their smoky lights, spend hours in hard work and incessant study; for Dr. Wadsworth is a man who believes in getting a full day's work from every young man in his classes, and he gets it.

Having spent a day and a half with the senior class at Ishpeming, we found the junior class at Houghton; but not in the schoolroom. In fact the schoolroom does not seem to be in demand except in weather when outdoor work cannot be done.

We found one section of the class with Prof. Edwards, hard at work deter-

mining the true meridian of Houghton. They had been up nearly all the previous night making their stellar and lunar observations. Another division of the class was engaged in practical surveying, doing work previously assigned them. But a single adverse criticism can be made upon the work done by this class.

A student not disposed to be thorough is not compelled to be, and there is no doubt that there are in the class at least two boys who are not making the progress which the excellent instruction they are receiving and the hopes of their parents would warrant. We are satisfied that the spur of a daily class test of the work gone over would soon shame them into better work or convince them that to proceed further would be a useless waste of time and money. We doubt if boys of sixteen and seventeen can, as a rule, be treated as students in the broad meaning of the term; they must be treated as pupils until the habit of study, and desire to acquire knowledge, have become so fixed as to need no spur. To leave young minds without other motive to excel than that found in their own natures, is to put them in contest with the temptation strong in everyone, to do what is most agreeable—not what duty demands. We doubt if the time will ever come when some system of marking, which will compel pupils to measure their progress by a teacher's estimate, will not be a necessity, and specially to the naturally indolent.

Prof. Edwards' instruction was of the highest order, and we were glad to learn from Hon. Thomas L. Chadbourne, Secretary of the Board of Control, that his services will be retained.

Owing to the necessary absence of Prof. Packard we saw no work in the department of chemistry, but from all we could learn it ranks well with that of the other departments.

The annual catalogue will have given you all the needed information of a statistical nature, which need not here be repeated. We desire, however, to invite your special attention, and, through you, the attention of the public, to some things of importance to the whole State.

The school, since its organization, has done its work in detachments, one section being located in one place in Houghton, and another section in another place. The unity of a school has never been secured, and that the school has done so much real and meritorious work must be ascribed to the intelligent energy of the Board of Control, and the excellent men chosen by them for instructors. We have no hesitation in saying, that considering the facilities, no institution in the State has ever made a better return for the money expended.

Again, the wisdom of the Legislature in locating the school at Houghton is made fully apparent by our visit.

The school is in every sense a mining school, and the mine owners of the Upper Peninsula are affording facilities to students of this school which they refuse to all others.

While the near location of the school to the mines renders the enjoyment of such facilities inexpensive, we found at Calumet and vicinity the senior class of the Columbia School of Mines studying the same matters as Dr. Wadsworth's senior class. They had come, and were staying, at large expense, and yet were unable to secure from the mine owners what was freely accorded to the pupils of our own Mining School. Indeed, the interest taken by mine owners in the school is not the least gratifying evidence; we found that the school is a necessity.

We found the new school building under way. It is being very substantially built; it will, however, be too small for the needs of the school before ten years have passed.

The Legislature should make provision for equipping the school in good shape; and a full corps of teachers should be employed, so that the school may be put upon a three years' course of instruction. The act organizing the school should be so amended as to confer a degree upon its graduates; there should also be a liberal appropriation for a library.

The conclusions we have reached are:

1. There is a need for the school.
2. It has been wisely located.
3. It is doing better work than its conveniences would warrant.
4. It should be wisely fostered.

In conclusion we wish to say, that, in our opinion, Dr. Wadsworth cannot discharge the duty of President of the school, and at the same time retain charge of the geological survey of the State.

Michigan requires that her schools should be of the best, and of such Dr. Wadsworth can make the Michigan Mining School, but it will require all his time and strength to accomplish this.

S. S. BABCOCK,
B. W. JENKS,
Visitors.

ADRIAN COLLEGE.

REPORT OF THE BOARD OF VISITORS.

HON. JOSEPH ESTABROOK,
Superintendent of Public Instruction :

DEAR SIR—The committee of visitation to Adrian College for 1888 respectfully submit their report. Two members of your committee spent Friday, May 18, at the institution. The visit of the third member was made later.

The ordinary work of the college was in progress at the time of our visit, and through the courtesy of the president and faculty, we were enabled to form a good idea of the regular procedure in the institution. The buildings are pleasantly situated on extensive grounds in the outskirts of the city. They are large and well arranged for the accommodation of the young men and young women, 160 in number, who are in attendance. The recitation rooms are of ample size, the dormitories sufficient for the present and future needs of the institution. There are three literary society rooms, a large museum, with valuable collections in zoölogy, geology, and paleontology, and a library. The college is fairly supplied with libraries and physical and chemical apparatus. Addition might profitably be made to the equipment in both directions. An enlargement of the library and the establishment of a biological laboratory would increase the efficiency of the college. However, there are abundant evidences that the aids possessed are well employed. Especially is this true in the department of physical and chemical science, where individual experimentation on the part of the pupil is demanded. The faculty are courteous and scholarly, evidently holding and deserving the confidence and respect of the students. Their self-sacrifice has enabled the institution to continue its work and enlarge its sphere of usefulness. They are effective instructors. The students are earnest and successful, evidently attending college with a purpose, and improving present opportunities to the utmost. We were impressed with the good spirit prevailing. There is evidently a bond of sympathy between professors and students. The utmost harmony seems to prevail. The moral tone of the college is good; everything is done to make the home influence and the Christian influence predominant. We attended chapel exercises and recitations in the several departments, and found the work everywhere moving well.

Mr. Hayden, of the committee, makes the following report concerning improvements:

A new oil-burning furnace has, within the last year, been put into the main building and, in connection with it, two oil tanks, one of a capacity of 200 barrels, the other with a capacity of 8 barrels. The oil is pumped from

the larger into the smaller tanks. About \$1700 have been expended during the past year in perfecting the heating apparatus. The design is to heat all the buildings with steam generated by new oil furnaces. During the past year a large refrigerator building has been put up and about \$1400 have been laid out in repairs upon roof and organ, damaged by tornado two years ago. It is hoped that a gymnasium will be erected during the coming summer. Funds for it have been partly raised. A base ball ground has recently been graded.

L. R. HALSEY,
N. H. HAYDEN,
Visitors.

ALBION COLLEGE.

REPORT OF THE PRESIDENT.

HON. JOSEPH ESTABROOK,
Superintendent of Public Instruction.

SIR—I have the honor to submit my report of the condition and work of Albion college for the year ending June 21, 1888.

The attendance of students has been larger than ever before, the number reaching 451, an increase of about ten per cent. over the preceding year. We are glad to be able to state that the increase is specially in the higher classes; we are receiving many times more graduates of the high schools than a few years ago.

The institution is under the control of a board of trustees appointed by the Detroit annual conference of the Methodist Episcopal Church, the Michigan annual conference and alumni association of the college, each conference appointing six trustees, and the alumni association three, of which board the president of the college is *ex-officio* a member, making 16 in all. To inspect the work, not only does the State appoint visitors annually, but both of the conferences and the society of alumni.

The board of instruction consists of 19 professors and teachers.

DEPARTMENTS OF THE INSTITUTION.

College of Liberal Arts.—Candidates for admission to the Freshman class must be at least sixteen years old, must pass examination in the primary English branches, and in all the studies of the preparatory course, or studies equivalent thereto, as taught in the high schools, unless admitted on diploma or certificate from high schools under special conditions.

Candidates for advanced standing must, in addition to the foregoing, pass examination on advanced studies for which credit is sought, unless coming from other colleges whose work is accepted by us.

We have arranged four distinct and radically unlike courses of study: the Classical, the Latin Scientific, the Scientific and the English.

The degree which the student will receive on graduation is determined by the course he has pursued up to the Junior year. The two years which follow are devoted wholly to *elective* work, except psychology, logic and one term of chemistry, which are required of all students who are candidates for degrees.

Several studies in the Freshman and Sophomore years have recently been made elective.

Preparatory School.—The object of this school is to provide young people who desire to fit themselves for college with the most complete advantages to make such preparation. It is not an academic department for general study, but is conducted purely in the interest of those who intend to pursue studies required for admission into college. One of the chief features of the curriculum of the preparatory school is that the modern languages are introduced at the very beginning of the course, in order that the student may be prepared to study the ancient languages, when reached, more successfully than it is possible otherwise to do. The entire work of the institution is based upon the principle that a considerable portion of the *present* in language, in history, in science, in philosophy, should be taught before the past, in order that the student may have the problem of knowledge clearly before him, so that he can intelligently study the development of truth. We begin with the *near*, the *concrete*, the *simple*, the *empirical*, and gradually proceed to the *remote*, the *abstract*, the *complex*, the *rational*. This is the natural and necessary order of mental growth, and the tasks to which the student is put should be in harmony with the laws of mind, instead of being in conflict with them.

Academic department.—We hold that no scholarship is symmetrical and complete without the study of the languages. Many, however, feel that they cannot take the time to pursue a full course. For this class we propose to provide the most ample opportunities to acquire a knowledge of such branches as they desire to master without taking up the languages. Therefore, an academic department—distinct from the preparatory and the college—has been organized. Students are admitted into this department whenever they are prepared to take up and successfully carry forward the work.

Conservatory of Music.—It is the chief aim of the conservatory to teach both the science and the art of music in such a thorough and systematic way that they shall be, *what they so often are not, of available and practical* use to the student after having completed a course. Great care is taken to secure a correct technique; also a proper position of the person, hand and arm, while the pupil is seated at the instrument.

Careful attention is given to the development of the muscles of the hand and fingers, and in acquiring flexibility of fingers, wrist, etc. In short, the methods which have for so many years made the German conservatories famous, are closely adhered to. Much time is given to the cultivation of a taste for the best forms of classic music.

The course in music consists of seven grades, each based upon such studies and selected pieces as form the standard of the various degrees of proficiency at the best institutions of a similar kind. Upon entering, each student is examined and graded accordingly, while promotion is not limited by time, but depends entirely upon the progress of the student. In most cases four years is sufficient to complete the course.

Instruction is given both in private lessons and by "class teaching," according to the preference of the student. The classes consist of either two or three pupils.

The courses have been arranged so as to secure the greatest thoroughness and proficiency in music as a science and an art. Students are admitted for a single term, but all will see the advantage of taking a full course of

instruction, including, not only the ordinary lessons given on the piano, organ or violin, but also harmony and counterpoint. The literary studies of the course have been selected with reference both to sound and varied scholarship and the accomplishments of learning.

Aside from the regular lessons given at the instrument, there is a weekly drill of the entire conservatory in the catechism of music. At these gatherings instruction is given which there is no time to impart in connection with individual or class lessons. There are also weekly rehearsals to drill and fit for public playing. The student thus gains confidence, his faults are corrected, and he is prepared to use to the best advantage the knowledge acquired.

Instructors of superior ability are employed to teach in connection with any of the instruments used for orchestral or band music. It is our aim to make the college a centre of interest and culture for the music-loving public, providing the best instruction for all who aspire to proficiency in any line of musical excellence.

As a part of the educational facilities of the conservatory, there is also maintained, in efficient organization, a complete orchestra. In this orchestra there are at present nearly fifty performers.

During the year there are several public recitals which are especially intended to improve the taste for, and promote the appreciation of, the best masters: Haydn, Mozart, Beethoven, Bach, Mendelssohn and Schumann, furnish the broadest subjects to express the depths and grandeur of musical conception. The students are required to take an active part in these exercises. Also recitals are given at the college by some of the most eminent musicians of Boston and other eastern cities, so that the student shall not fail to come into relation with the highest power of the art of music.

For all students desiring to study the principles of vocal music, a rudimental class is organized, continuing through the year, the tuition for instruction being merely nominal—to provide music for the most efficient movement of the class. After completing the study of the rudiments the students are admitted into the general chorus in which there is no tuition. The work of the chorus consists of the rendition of the higher forms of vocal music.

Voice culture is made a specialty. This department is very rapidly growing. Very many persons who enter upon the study of the principles of vocal music or join the chorus class, come to appreciate the desirableness of special voice training. All who desire to fit themselves for singing in church choirs, for teachers of vocal music, or for professional singing in any capacity, can here obtain the instruction and culture desired.

The music students are organized into a Theory Class, which meets each week for special instruction.

Students intending to teach music receive thorough instruction in the art of teaching, a special class being organized for that purpose.

I have, it will be seen, drawn out to greater length my report of the work of the conservatory of music than of the college of liberal arts, as the latter has in previous reports received more attention.

School of Painting.—The aim of this department is to conduct the pupil with thoroughness from the simplest rudiments up to a knowledge of the higher branches of art, giving, as far as possible a perfect understanding of all the work entered upon. The time has come when every body is expected to have some knowledge of the fine arts.

The student receives special instruction in free-hand and illustrative drawing, mechanical drawing, sketching from nature, fine map drawing, object drawing, linear and aerial perspective; landscape, figure, flower and fruit painting in oil, water-colors, and French pastel; decorative painting and designing; the mixing of all shades from a few primary colors to all the art requires.

Great emphasis is put upon sketching and drawing, both in preparing pictures for the paint, and in sketching from nature, life, and objects.

Commercial Department.—The object of this department is two-fold:

1. It gives to all who may wish to engage in business pursuits an opportunity to fit themselves in the most practical manner possible.

2. It affords an opportunity to all students at their option to take commercial studies as a part of a literary course, and receive credit for the same.

In our school we use no text-book. The student becomes a business man the moment he enters school and is thrown entirely upon his own resources. What he learns by experience he will never forget. He sees the transaction as it occurs, and associates the entry with the transaction. Every entry to be found in a student's book has a counterpart in some other student's book. There are no fictitious transactions. The student handles the goods which he buys and sells, giving and receiving checks, notes, drafts, and all the various forms of commercial paper. By this method the student is taught self-reliance. There are no two sets of books in the school that are alike and hence there can be no opportunity for copying results. Each student must think and act for himself. In our school only the shortest methods are used. We follow no one style of book-keeping but take advantage of the good points of all. Only real values bring out and test the ability and sagacity of the person concerned. In the preparation of our course we have had in mind not simply a trained book-keeper, but rather a trained business man. The course is designed to cover a period of nine months.

Our Course of Study has been arranged with the aim of developing the business capacity of the student by a thorough course of training. Its object is not simply to make book-keepers, but also to impart a knowledge of the laws which govern the business world; a knowledge of penmanship, grammar, mathematics, and business forms; so that by a broad and systematic training our students may become successful business men and worthy citizens of our great Republic.

School of Oratory.—The college has just established a department of oratory. As we have not had time to test its workings no report can as yet be made in regard to this important line of work.

FURTHER ENDOWMENTS.

For the prospective endowment of another chair in the college, Rev. John Morrison Reid, D.D., of New York, has given to the college property with a present value of \$25,000. Some small bequests have also been realized.

All of which is respectfully submitted.

L. R. FISKE,
President.

ALMA COLLEGE.

REPORT OF THE BOARD OF VISITORS.

HON. JOSEPH ESTABROOK,
Superintendent of Public Instruction:

SIR—Your committee appointed to visit Alma College respectfully submit the following report:

We made separate visits on the 1st and 12th and the 13th days of June, 1888.

A most cordial reception was given the committee, and the fullest opportunity afforded to see the working of the college in all its departments, including chapel exercises, class recitations, the inspection of premises and buildings, a visit to the library, museum, laboratory and dining hall.

Your committee take pleasure in stating that the instruction given in the classes visited was of a high order, showing ability on the part of the faculty, also that a spirit of self-reliance, thoroughness, and manly independence seems to be engendered in the students. It was noticeable that the students, in large part, are young people who would never have availed themselves of the benefits of higher education had not the college been located near them.

It is the opinion of the visitors that Alma college, in this, the first year of her history, has well demonstrated the wisdom and far-sightedness of her founders and benefactors, and established her right to live, and be received among the institutions of this commonwealth whose high aim is to promote Christian education. This youngest member of the family of denominational colleges in this State is not to be considered as in any sense a menace to the older and more liberally endowed institutions. On the contrary she will doubtless prove a means of diverting so much more of the wealth of the citizens of the State from the channels of business to the means of culture for those desiring it; wealth too, that for the most part, would never have found its way into the treasuries of any of the older colleges.

Nearly one hundred students have been enrolled during the year, and larger numbers may be confidently expected when the high moral tone of the college and the character and worth of the instructors become better known.

The library, laboratory, apparatus and general outfit of the college seem meager to those familiar with our older schools, and yet Alma, at the end of her first year, has more of these appliances than some of our oldest colleges accumulated in the first ten years of their history. We may reasonably expect that time, and a fuller acquaintance with the aims and methods of the school, will secure public confidence and enlarged endowments, till Alma college will become an important factor in the forces for promoting Christian education.

E. P. CHURCH.

H. N. M. CUTCHEON.

Visitors.

DETROIT COLLEGE.

REPORT OF THE PRESIDENT.

HON. JOSEPH ESTABROOK,
Superintendent of Public Instruction :

SIR—In compliance with the law, I have the honor of presenting the following report of Detroit College for the academic year, ending June 27th, 1888:

Board of Trustees of Detroit College for 1887-8:

Rev. John P. Frieden, S. J., President.

Rev. Thomas A. Hughes, S. J., Secretary.

Rev. Joseph G. Zealand, S. J., Treasurer.

Rev. Charles Coppens, S. J.

Rev. Hugh M. Finnegan, S. J.

The Faculty for the same session was as follows:

Rev. John P. Frieden, S. J., President.

Rev. Cornelius B. Sullivan, S. J., Vice-President, and Prefect of Studies.

Rev. Joseph G. Zealand, S. J., Chaplain.

Rev. Charles Coppens, S. J., Professor of Mental and Moral Philosophy,
Lecturer on the Evidences of Religion.

Rev. Herman Meiners, S. J., Professor of the Natural Sciences and of the
Higher Mathematics.

Rev. Francis J. Berberich, S. J., Professor of Chemistry and Mathematics,
Lecturer on Commercial Law.

Rev. Thomas A. Hughes, S. J., Professor of Rhetoric and Lecturer on
English Literature.

Mr. William Hornsby, S. J., Professor of Poetry and Lecturer on English
Literature.

Mr. Thomas F. Brown, S. J., Professor of Humanities.

Rev. Hugh J. Erley, S. J., Professor of First Academic.

Mr. Edward P. Coppinger, S. J., Professor of Second Academic.

Mr. Cornelius Shyne, S. J., Professor of Third Academic.

Mr. James P. Monaghan, A. B., Professor of Third and Fourth Commercial.

Rev. Michael Cornely, S. J., Professor of the Preparatory Department.

Rev. Charles Coppens, S. J., Professor of French.

Rev. Hugh J. Erley, S. J., and Rev. Herman Meiners, S. J., Professors of
German.

Rev. Francis J. Berberich, S. J., and Mr. Thomas F. Brown, S. J., Professors of Elocution.

Mr. William H. Machen, Professor of Drawing.

Mr. Allen L. Bours, Professor of Book-keeping.

Mr. John M. Tice, Professor of Penmanship.

Mr. Gregory Freytag, Professor of Vocal Music.

The following members of the Faculty maintained the discipline of the College:

Mr. Thomas F. Brown, S. J.

Mr. Edward P. Coppinger, S. J.

Mr. William L. Hornsby, S. J.

In the last report reference was made to the new course of studies adopted by the Colleges of the Jesuit Province of Missouri. For a full account of the course of studies I must refer to our catalogue for the session 1887-8, pp. 9-24. Several copies of the catalogue are sent to your office, together with the present report.

This course was carried out fully in Detroit college during the past year, and the results are satisfactory. The professors of the college found it of great assistance in marking clearly for them the amount of matter in the various branches to be treated during the session. The students of the various classes easily attained the standard appointed for each class.

An event, which redounds greatly to the proficiency of the students of Detroit college in Latin, was the honor won by two of them in the "Inter-collegiate Latin Prize Contest." The contest was open to the rhetoric and poetry classes of the following colleges: St. Louis University, St. Louis, Missouri; St. Xavier College, Cincinnati, Ohio; St. Ignatius College, Chicago, Illinois; St. Mary's College, St. Mary's, Kansas; Detroit College, Detroit, Michigan; Creighton College, Omaha, Nebraska; Marquette College, Milwaukee, Wisconsin.

A committee composed of non-residents of any of these colleges was appointed to select the subject and to revise the composition. Subject chosen by the committee—a paraphrase of Adelaide Procter's poem, "Now." The subject was made known to the contestants at 9 A. M., May 18, and on the same day, between the hour just named and 4 P. M., the composition was written within the precincts of the competing colleges. The only assistance permitted was the use of a Latin dictionary.

The prize was awarded to a student of Detroit College, Aleysius F. Frumveller, of the Class of Poetry, and the honor of being next in merit was shared equally by Charles F. Higgins, of the Rhetoric Class, and a student of St. Ignatius College, Chicago, Illinois.

Among the various College societies connected with this institution, the Philomathic Society deserves a special mention for the excellent work done by it during the past academic year. It is a society intended to foster a taste for eloquence and literature. It is open to the students of the three higher classes, and last year it had a membership of thirty-five. The high order of its exercises during the last session won for its members many encomiums from persons not connected with the College, who were present at its meetings by special invitation.

The work done by the students in free-hand drawing has also merited praise from the State Board of Visitors, and from all to whom the specimens of drawing, executed by them, were exhibited.

The College Library has been increased by many valuable works which were donated by friends or purchased by the College. We must also acknowledge the courtesy of the various departments of the general government at Washington for many installments of U. S. Government documents. The College is specially indebted to Hon. William H. Maybury for the assistance given by him in procuring these documents from the various departments and also for many private donations from the gentleman himself.

The number of students attending the course of studies afforded by Detroit College during the past session was 263. Of this number 60 were in the Collegiate Department, 113 in the Academic Department, 39 in the Commercial Course and 51 in the Preparatory Department.

It is the common opinion of the Faculty that the past session has been one of undoubted success.

The work done by the professors and students during its course gives promise of the best results.

I have the honor to remain, very respectfully yours,

J. P. FRIEDEN, S. J.,
President.

GERMAN AMERICAN SEMINARY.

REPORT OF THE BOARD OF VISITORS.

HON. JOSEPH ESTABROOK,
Superintendent Public Instruction:

DEAR SIR—As chairman of the committee appointed by you to visit the German American Seminary, I submit the following report. I visited the institution on May 4, and after a most cordial reception on the part of Director George Herman, was shown through the various departments of the Seminary, where I found the students busy with their studies.

I was much pleased with the thoroughness of the work done, as well as with the general good order of every room. The discipline of the Seminary is somewhat different from that of other institutions. While everything was done in the most informal manner, there was cheerful obedience and polite address, while the best order prevailed. This it seems to me deserves special mention.

I would also commend the good work done in history, arithmetic, and geometry.

In my opinion the institution is thoroughly well equipped for the work it is designed to do, and well worthy the patronage and support of the people.

Very respectfully,

CONSTANTIN WATZ,
Chairman Board of Visitors.

HILLSDALE COLLEGE.

REPORT OF THE PRESIDENT.

HON. JOSEPH ESTABROOK,
Superintendent of Public Instruction.

SIR—Referring to sec. 5195, Howell's statutes, I have to report that Hillsdale College is holding on its way. It is its aim to do thorough work. Preparatory students are put under careful training, to the end that the college classes may show better results. From lowest to highest class the aim is at thoroughness and quality of work rather than quantity. We seek the development of real character. Body, soul and intellect are included in the plan. The class room, the prayer meeting and the gymnasium each has its place in our scheme of work. The teachers are of that age when enthusiasm and judgment most happily combine, and each is trying to make his department the best.

Among recent improvements may be noted gratifying additions to the endowment fund, the election of an alumni professor, and of a fourth professor to the theological department, the making the college courses (classical and philosophical) of equal length, the addition of a course in history, the strengthening of the normal department, and a general advance along the line of good work that the college has been pursuing in the past. The alumni trustees and friends of the institution are awakening to a more active sense of the responsibility and privilege placed upon them.

The departments of the college are academic, theological, art, musical, commercial, normal and a preparatory. Each of these is presided over by the best available teachers, with competent assistants.

We are proud of the educational record of the State, and we want Hillsdale to help to make that record still better.

GEORGE F. MOSHER,
President.

HOPE COLLEGE.

REPORT OF THE PRESIDENT.

HON. JOSEPH ESTABROOK,

Superintendent of Public Instruction:

SIR—The following is a detailed report of Hope College, at Holland, for the year ending June 30, 1888.

THE COUNCIL.

REV. CHARLES SCOTT, D. D., President of the College.

Term Expiring in 1889.

Rev. G. H. Mandeville, D. D., N. Y. City.
Rev. Peter De Pree, Grand Rapids, Mich.
Rev. Henry E. Dosker, Holland, Mich.

Term Expiring in 1890.

Rev. James F. Zwemer, Alton, Ia.
Rev. Peter Lapeltak, Overisel, Mich.
Rev. Derk Broek, Holland, Mich.

Term Expiring in 1891.

Isaac Cappon, Esq., Holland, Mich.
Rev. Ale Buursma, Orange City, Ia.
Rev. William Moerdyk, Pella, Ia.

Term Expiring in 1892.

Arend Visscher, Holland, Mich.
Rev. J. S. Joralmon, Norwood Park, Ill.
Rev. Wm. H. Phraner, Irving Park, Ill.

Term Expiring in 1893.

John C. Benham, M. D., Hudson, N. Y.
Rev. John Broek, Milwaukee, Wis.
Rev. Balster Van Ess, Roseland, Ill.

Term Expiring in 1894.

Rev. William J. R. Taylor, Newark, N. J.
Rev. Peter Moerdyke, Grand Rapids, Mich.
Rev. Ame Yennema., Kalamazoo, Mich.

OFFICERS OF THE BOARD.

President, Rev. Peter Lepeltak.

Vice President, Rev. William Moerdyk.

Secretary, Rev. Peter Moerdyke.

Treasurer, Isaac Cappon, Esq.

Executive Committee.

President, Charles Scott; *Chairman*, Rev. Derk Broek; Rev. Peter Moerdyke, Mr. Isaac Cappon, Rev. Peter Lepeltak.

The Council meets regularly in April and in June. The Executive Committee has monthly meetings, and *ad interim* is invested with many of the duties of the Council.

THE CORPS OF INSTRUCTION.

Rev. Charles Scott, D. D., President, Instructor in Mental and Moral Philosophy, and Professor of Chemistry and Natural History.

Cornelius Doesburg, A. M., Professor of Modern Languages and Literature, and of Art.

Gerrit J. Kollen, A. M., Professor of Applied Mathematics, Physics, Political Economy and Logic.

Rev. Nicholas M. Steffins, D. D., Professor of Didactic and Polemic Theology.

Henry Boers, A. M., Professor of the English Language and Literature, and Rhetoric.

John H. Kleinheksel, A. M., Professor of Pure Mathematics.

James G. Sutphen, A. M., Professor of the Latin Language and Literature.

Rev. John J. Anderson, A. M., Professor of the Greek Language and Literature.*

Rev. Henry E. Dosker, A. M., Lector in Exegetical and Historical Theology.

John B. Nykerk, A. M., Tutor and Instructor in Vocal Music.

Prof. P. A. Latta, in charge of Normal Instruction.

Mrs. C. Van Raalte Gilmore, Lady Assistant and Matron.

At the April meeting of the Council, Rev. John H. Gillespie, A. M., was elected Professor of Greek, and is expected to enter upon his duties in September, 1888. Subsequently Prof. J. W. Humphrey, formerly of Wayland, Mich., was elected to take charge of the Normal Department. Hence there is no vacancy in the Corps of Instruction.

The Theological Seminary has only had five students during the year, all graduates of the College. The course of study, however, is as full as in the Sister Seminaries of the Church at New Brunswick, N. J., and is completed. This department is entirely under the Superintendence of the General Synod, R. C. A. That body has elected Rev. John W. Beardslee, D. D., as Professor of Biblical Languages and Exegeses, and he has accepted.

THE COLLEGE.

1. Seven of the Professors already named compose the faculty. Any studies not directly belonging to the various classes are assigned as may be most practicable; and the curriculum is in no way neglected.

2. The College students have numbered 37, as follows: Seniors, 7; Juniors, 8; Sophomores, 9; Freshmen, 13. The degree of A. B. has been conferred on the seven Seniors, and that of A. M. on six members of the class of 1885.

3. The course of study remains practically as when it was last published in the State Superintendent's Report. Instead of giving a list of text books, it may be better to sum up our plan of education. In order to enter the Freshman Class the preparation required in the Classics and Mathematics is not the "high standard" which is coming into use, but the amount of English, History, etc., necessary for a good *general* scholarship, is deemed a greater essential. The time given to Latin is equivalent to daily recitations for two

* Professor Anderson resigned in January and his place was supplied by Miss Sarah E. Satterthwaite, A. B., Instructor in Latin and Greek.

years, and that given to Greek, to two years and one-half of daily recitations. The object is to enable the student to read at sight in these languages, and to translate in some degree from one into the other. Beginning in the Sophomore year, French and German are studied through the rest of the course, as if daily for two years. Mathematics are continued to the Calculus, and are applied to Surveying, Engineering, Mechanics and Astronomy. Meantime English, Belles-letters, Science and Philosophy are attended to in order; and all make the "regular course" which entitles to our degree of A. B. A few select a course, as by substituting French and German for the Classics, or by dropping one or more of the branches, but our graduates are, in general, literary, classical and scientific as above, and the results have been satisfactory. Zoölogy and Biology have been introduced during the year.

THE GRAMMAR SCHOOL.

1. All the Professors and Teachers, except the Theological, compose the Faculty, and assist in giving instruction. In this Department, there is an average of 25 recitations per week to each pupil, and not less than 18 are required.

2. There have been 106 students in attendance, viz: in the A class, 23; in the B, 22; in the C, 35; in the D, 21; and unclassified, 5. These added to the others, as previously given, make a total of 148.

3. As in the College, the Course of Study is unchanged. Latin is studied for three years and Greek for two years. German may be substituted for Greek, but all are advised to take Latin. Mathematics are continued through Algebra, and into Geometry. The Grammar School Course is for four years, and is intended to be thorough in English studies, Grammar, Rhetoric, History, Civil Government, Natural Philosophy, etc. An average of 20 graduate annually from the Grammar School, a number of whom engage in the profession of teaching, but the majority enter upon some course of higher education, perhaps in the State University.

A Normal Department has been introduced. Those who desire to be teachers will pursue more or less of our regular course, and append thereto a special training needed for their school work. The full Normal Course will begin with the "C" class, and extend through the Freshman. An experienced instructor from the Public Schools will have charge of this Department, as has Prof. P. A. Latta, during the current years, 1887-88.

A summer school for the preparation of acting teachers will be held during the months of July and August in each year. Arrangements have been completed for the present season. The school will open July 10th and Prof. J. W. Humphrey will have charge thereof as Conductor.

FINANCES.

1.—Contingent Fund.

Receipts:

Balance on hand April, 1887.....	\$828 11
Interest from the funds.....	6,375 00
Rents from real estate.....	834 50
Students' fees.....	2,335 84
Donations.....	2,915 50
Miscellaneous.....	115 00
Total.....	<u>\$13,234 04</u>

Expenses:

Salaries.....	\$10,338 41
Expenses of the council.....	128 82
Expenses of the treasury.....	874 36
Buildings and grounds.....	375 29
School requisites.....	58 41
Fuel and light.....	92 50
Printing and advertising.....	200 50
Care of real estate and taxes.....	487 68
Books and sundries.....	228 66
Interest.....	302 00
Balance on hand, April, 1888.....	697 41
Total.....	\$18,234 04

*II.—Permanent Fund.**Receipts:*

From David Terhune, Hackensack, N. J.....	\$1,000 00
From sundry donations.....	884 18
Total.....	\$1,884 18

Which amount has been invested.

III.—Amount of Funds.

Held in trust by the General Synod (R. C. A.).....	\$35,402 00
Held in trust by the Board of Education.....	1,000 00
Held in trust by the "Classical Board".....	10,000 00
Mortgages held by the Council.....	26,006 57
Notes paying interest.....	4,002 50
Real estate, paying rent.....	7,650 00
Total of productive funds.....	\$118,060 07

IV.—Value of Other Real Estate.

Value of the Campus and buildings.....	\$40,000 00
" " separate city lots.....	8,000 00
" " lands on "Point Superior".....	9,000 00
Total.....	\$57,000 00

LIBRARY.

Three hundred and seventy-six bound volumes have been bought or presented; also a large number of periodicals and pamphlets. Some of these have special value. About two hundred volumes have been donated to an academy in Iowa and the Library numbers over 7000 books.

There is no charge for the use of the Library and its Reading Room, but they are not open so much, nor made so beneficial as they might be if a small annual fee were required of every student.

EXPENSES.

Board is obtained in private families at from \$2.25 to \$2.75 per week, including furnished rooms; the rooms in the Van Vlick Hall have a charge of \$5 for the year. The regular fees are \$15 a year and a graduation fee of \$5, otherwise there are no charges in the institution, and, in general, an amount less than \$200 per annum will meet all the necessary expenses at Hope College.

THE ENDOWMENT.

The funds of the College need a considerable increase and should reach at least \$200,000. Two financial agents will go into the field during the coming year, and endeavor to add \$5000 or over to the permanent investments; and the future of the College is much connected with their success. For the first time in ten years the income of the Council has been insufficient to meet the expenditures, but it is hoped that the deficit may not be long continued.

I add with regret that during the year no member of the "Board of Visitors" has been able to attend any of the exercises of the Institution.

Respectfully submitted,

CHARLES SCOTT,

President.

KALAMAZOO COLLEGE.

REPORT OF THE PRESIDENT.

HON. JOSEPH ESTABROOK,
Superintendent of Public Instruction:

DEAR SIR—The following is the report of the Kalamazoo College as required by the provisions of Sec. 5195, Howell's Statutes:

Amount of Real Estate.....	3 buildings
Estimated value of Real Estate.....	\$118,000 00
Amount of other funds.....	107,189 65
Yearly income from all sources.....	17,002 79
Number of Instructors.....	11
Number of students in Senior Class.....	4
Number of students in Junior Class.....	4
Number of students in Sophomore Class.....	12
Number of students in Freshman Class.....	10
Students pursuing select studies.....	14
Students in the Preparatory Department.....	98

Studies pursued.—Latin, Greek, Mathematics, Natural and Physical Science, French, German, English Literature, Psychology, Theology and Philosophy, Rhetoric, Music and Painting and Drawing.

Tuition in any Department, \$8.50 per term.

MONSON A. WILCOX,
President.

MICHIGAN FEMALE SEMINARY.

REPORT OF THE BOARD OF VISITORS.

HON. JOSEPH ESTABROOK,
Superintendent of Public Instruction :

DEAR SIR—We, the undersigned members of the State Board of Visitors to Michigan Female Seminary, visited the same in June.

We found the different departments in a prosperous condition generally. The grounds, consisting of an enclosure of thirty acres, are situated on the hill overlooking the beautiful city of Kalamazoo. The building consists of a four-story brick, with a wing built of wood. The school is modeled after the Mt. Holyoke Seminary, founded by Mary Lyon. The pupils board in the building and assist one hour daily in the domestic work of the family. The faculty of teachers are attached to their departments and live with the students at the school. The course of study is well adapted to the wants of a preparatory school for young ladies. The school has not been able to do as good work during the past few years as it might have done, on account of an annual change of teachers, putting in each year nearly all new teachers without experience or special preparation in methods, or in the theory and art of teaching.

The seminary is provided with a well selected library of about fifteen hundred volumes. The reading room is supplied with many of the leading newspapers and magazines for the use of the pupils. The museum contains specimens of birds and insects and herbariums of the flora of the immediate section. A telescope, a skeleton, and some philosophical apparatus are in use to illustrate the science work. The art department is receiving special attention. We desire to commend the feature of bible study which is one of the studies of each year of the course. We listened to one of these recitations by the seniors and were greatly pleased to find both teacher and students so earnest in the lesson.

The needs of the seminary are a fuller supply of apparatus for the science departments, a teachers' library for use of the teachers and a better salary for the teachers, so that the present corps might be retained for a term of years.

Since our last visit some needed improvements have been made. The reception room has been changed to the first floor, the steps in front have been removed, and an elevator put in, which adds very much to the convenience of all.

J. M. BALLOU,
ABBIE PEAROE,
Visitors.

MICHIGAN MILITARY ACADEMY.

REPORT OF THE SUPERINTENDENT.

HON. JOSEPH ESTABROOK,
Superintendent of Public Instruction :

DEAR SIR—I have the honor to present this my tenth annual report of the Michigan Military Academy.

The academic staff for the year 1887-8 was as follows:

Col. J. Sumner Rogers, Superintendent.

William H. Butts, A. M., Principal, Mathematics.

Thomas Bertrand Bronson, A. M., Modern Languages.

Delos Dan Jayne, B. S., History and Literature.

Lieut. Frederick S. Strong, 4th U. S. Artillery, Military Science and Tactics.

Samuel F. Hawley, Ph. B., Latin.

William Otis Waters, A. B., Greek and English.

Irvah Lester Winter, A. B., Elocution and Rhetoric.

Assistant Engineer, Frank W. Bartlett, U. S. Navy, Science and Manual Training.

In the academic work the courses of studies remained unchanged, with the following exceptions:

The English course was incorporated into the Academy course, which requires three years of Science, one-half year of Political Economy, one-half year of Law, one year of Latin, French or German, and special work in English masterpieces, in addition to the usual English, Mathematical and Historical studies.

The mathematical work was so modified as to require hereafter in all courses one and one-half years of Algebra and six weeks of Plane Trigonometry in addition to Plane and Solid Geometry.

In Greek the fourth book of Xenophon's *Anabasis* and three books of Homer's *Iliad* were added to the requirements for graduation.

Two courses in Elocution were offered as optional studies: Elocution B., giving drill in simple narrative and descriptive reading, during the first semester; Elocution A., devoted to voice culture and platform speaking, dur-

ing the second semester. Gold and silver medals were awarded for excellence in public declamation.

Mechanical Drawing was continued as an optional study and instruction in the use of mechanical appliances, with practical work in the shop, was given to the Physics class during the last six weeks of the year.

Facilities were offered for the study of Stenography and Type-writing under an experienced teacher.

The number of cadets enrolled during the year was 141, an increase of 25. Of the whole number 48 per cent. were from Michigan, and the remainder represented fourteen States and Territories and one foreign country. In their courses of study they were classified as follows: Preparatory, 36; Classical, 5; Latin, 6; Scientific, 25; Academy, 69.

The graduating class had seventeen members, of whom eight enter college, eight follow business pursuits, and one returns to the Academy as a post-graduate.

The alumni of the Academy now number 114; classical, 16; Latin, 7; Scientific, 36; Academy, 21; English 34. Sixty have continued their studies in colleges and scientific schools, and fifty-four have chosen business.

The cadet barracks have been extended so as to accommodate fifty more students. A kitchen and a mess hall, seating two hundred cadets, have been built and furnished with the most approved appliances.

The good health of the cadets and their systematic physical development testify more strongly every year in favor of the location of the Academy and of the excellence of its military system. The graduates of the Academy are admitted to the University of Michigan in all courses on diplomas bearing the recommendation of the faculty, and a similar courtesy is often extended by other colleges and scientific schools.

I am very respectfully your obedient servant,

J. SUMNER ROGERS,
Superintendent.

REPORT OF THE BOARD OF VISITORS.

HON. JOSEPH ESTABROOK,

Superintendent of Public Instruction:

SIR—In accordance with my appointment as one of the State Visitors to the Michigan Military Academy, I have to report that I was present at the annual examinations, June 7th and 8th. I visited the classes in Mathematics, History, French, German, Civil Government, and others, both advanced and elementary, and was highly pleased with the evidences of good work on the part of both teachers and pupils. An atmosphere of manliness pervaded the place. If any one is indifferent to the value of such institutions in the State, let him visit the Academy and become enthusiastic over it. It is worth much to a boy, during the growing period, whether in respect to physique or to character, to be placed under military discipline. The habits of punctuality, the sense of honor, the erect and manly bearing, courtesy not only towards superiors, but among themselves, advancement in rank by excellence, both in the class-room and in military drill,—all conspire to develop full men. These influences, and the high moral tone pervading the institution, can not fail to produce good results in the young men who attend there. The two performances which I will cite as illustrating the double work of the Academy were the review at the close of the day, and the prize

declamations in the evening. *Training* was shown in every movement, both on the campus and on the platform; but it was a training that evidently aimed at the development of individuality, as well as at promptness and uniformity of movement. In the recitation room, at chapel, in the barracks, in the mess-room; everywhere the deportment was such as pleased me. The teachers are enthusiastic in their work, in sympathy with the young men under their charge, and proud of their institution—as they ought to be. The barracks are being enlarged, which is a good evidence of the value and growing popularity of the school.

GEORGE F. MOSHER.

Visitor.

OLIVET COLLEGE.

REPORT OF THE PRESIDENT.

HON. JOSEPH ESTABROCK,

Superintendent of Public Instruction :

DEAR SIR—The laws of the State require me annually to report to the Superintendent of Public Instruction the names of the Trustees and Faculty of the College, its courses of study, and any other facts that may help show its condition. In accordance with this requirement I present the report for the Academical year of 1887-8.

The corporation of the college consists of twenty-five trustees, and is self-perpetuating. Four members are elected annually. The President of the College is *ex officio* the head of the corporation.

CORPORATION.

REV. HORATIO Q. BUTTERFIELD, D. D., President.

Term Expires 1888.

David Whitney, Jr., Esq., Detroit.
Hon. Sullivan M. Cutcheon, Detroit.
Hon. Oramel Hosford, Olivet.
Hon. Asa K. Warren, Olivet.

Term Expires 1889.

Rev. James L. Patton, Greenville.
Rev. Philo R. Hurd, D. D., Detroit.
Harvey J. Hollister, Esq., Grand Rapids.
Hon. Alanson Sheley, Detroit.

Term Expires 1890.

Homer O. Hitchcock, M. D., Kalamazoo.
Fitz L. Reed, Esq., Olivet.
Philo Parsons Esq., Detroit.
Dexter M. Ferry, Esq., Detroit.

Term Expires 1891.

Rev. Wolcott B. Williams, Charlotte.
Rev. Leroy Warren, Lansing.
Rev. Abram B. Allen, Hannibal, Mo.
Rev. A. Hastings Ross, D. D., Port Huron.

Term Expires 1892.

Rev. Joseph L. Daniels, Olivet.
Henry Fralick, Esq., Grand Rapids.
Hon. Jacob S. Farrand, Detroit.
Rev. John H. Barrows, D. D., Chicago, Ill.

Term Expires 1893.

Hon. Jas. McMillan, Detroit.
Rev. Henry H. Northrop, Flint.
Frank S. Belcher, Esq., Charlotte.
Rev. Job Pierson, D. D., Ionia.

The immediate care of the College is entrusted to these officers and committees:

Executive Committee.—H. Q. Butterfield, O. Hosford, J. L. Daniels, F. L. Reed, A. K. Warren.

Library Committee.—H. Q. Butterfield, J. Estabrook.

Treasurer.—F. S. Belcher.

Assistant Treasurer and Secretary.—G. W. Keyes.

Financial Agent.—Rev. W. B. Williams.

FACULTY.

Rev. Horatio Q. Butterfield, D. D., President, Drury Professor of Mental and Moral Philosophy.

Rev. Oramel Hosford, A. M., Stone Professor of Astronomy and Natural Philosophy, and Instructor in Mathematics.

Rev. Joseph L. Daniels, A. M., Parsons Professor of the Greek Language and Literature.

Rev. Joseph Estabrook, A. M., Professor of Logic and English Literature, and Principal of the Normal Department.

Stewart Montgomery, A. M., Professor of Chemistry and Physiology.

Rev. Jean Frederic Loba, A. M., Professor of Rhetoric and Modern Languages.

Allen W. Gould, A. M., Rutan Professor of the Latin Language and Literature.

Hermon C. Bumpus, Ph. B., Professor of Biology and Geology.

Hermon W. Dubee, Professor of Music.

Hamilton King, A. M., Principal of the Preparatory Department and Instructor in Greek and History.

George N. Ellis, A. M., Instructor in Latin.

[To be filled January 1, 1888.] Instructor in English, Penmanship, and Book-keeping.

Catharine E. Hutchings, A. B., Principal of the Ladies' Department, on the Dennis Foundation.

Alice Mary Warren, B. L., Instructor in Mathematics.

Ella M. Kedzie, A. B., Instructor in Painting and Drawing.

Miss Anna B. Shepard, Instructor in Vocal Music.

Miss L. L. Hosford, Teacher of the Piano and Organ.

Joseph L. Daniels, A. M., Librarian.

SUMMARY OF STUDENTS FOR 1887.

College—	
Classical Course.....	49
Scientific Course.....	81
Literary Course.....	41—121
Preparatory—	
Classical Course.....	65
Literary Course.....	7
Scientific Course.....	6 - 78
Normal and Elective.....	75
Conservatory of Music.....	82
Art.....	40
	396
Deduct for names inserted twice.....	119
Total.....	277

GRADUATES AT THE LAST COMMENCEMENT.

Classical Course.....	8
Literary Course.....	6
Scientific Course.....	5
Master of Arts in Course.....	2

COURSES OF STUDY.

COLLEGE.

CLASSICAL COURSE.

Freshman Year—First Term.

Latin : Livy. Studies in the Military and Political Antiquities of Rome.

Greek : Homer—The Odyssey. Lectures on the Homeric Poems. Greek Prose Composition.

Mathematics : Algebra completed.

Oratory : * Lectures on Composition and Style. Essays, Discussions, Orations and Elocution.

Second Term.

Latin : Horace—Odes. Catullus—Selections. Lectures on Roman Literature.

Greek : Selections from Herodotus and Thucydides. Lectures on Greek History. Greek Testament.

Mathematics : Geometry completed.

Oratory : Lectures on Composition and Style. Essays, Discussions, Orations and Elocution.

Third Term.

Greek : Plato—The Apology and Crito. Greek Testament.

Natural Science : Botany—Phænogams, with Laboratory Work.

Mathematics : Trigonometry—Plane and Spherical.

Oratory : Lectures on Composition and Style. Essays, Discussions, Orations and Elocution.

Sophomore Year.—First Term.

Latin (3 h.) : Terence—Andria. Exercises in Latin Conversation.

Greek (2 h.) : Xenophon—Memorabilia.

English : Rhetoric.

Mathematics : *Analytical Geometry*. †

French : *Grammar*. *Chardenal's First French Course*.

German : *Grammar*. *Stern's Studien und Plaudereien, First Series*.

Nat. Science : *Inorganic Chemistry*.

Oratory : Lectures on Composition and Style. Essays, Discussions, Orations, and Elocution.

Second Term.

Latin : Tacitus—Agricola. Pliny—Select Letters. Lectures on Philology.

English : History of English Literature.

Nat. Science : *Inorganic Chemistry*. *Qualitative Analysis*.

French : *Grammar*. *Sauveur's Causeries*. *Chardenal's French Exercises*.

German : *Grammar*. *Stern's Studien und Plaudereien, Second Series*.

Oratory : Lectures on Composition and Style. Essays, Discussions, Orations, and Elocution.

* Lessons in the Bible or Greek Testament, and Oratory, weekly throughout the course.

Third Term.

Latin: Juvenal—Select Satires. Studies in the Institutions and History of the Roman Empire.

Greek: Æschylus—Prometheus. Lectures on the Greek Drama.

French: *Chardenal continued. Knapp's Modern French Prose.*

German: *Classics.*

Mathematics: *Surveying and Field Work.*

Oratory: Lectures on Composition and Style. Essays, Discussions, Orations, and Elocution.

Junior Year.—First Term.

Latin (2 h.): Horace—Epistles and Select Satires.

Greek (3 h.): Sophocles—Antigone.

German: *Nathan der Weise—Lessing.*

French: *Picciola.*

English: *Study of English Classics—Chaucer, Spenser, Shakespeare Milton, with Lectures.*

History: *Ancient and Mediæval History.*

Physics: *Mechanics and Hydrostatics.*

Oratory: Lectures on Composition and Style. Essays, Discussions, Orations, and Elocution.

Second Term.

Greek: Demosthenes—De Corona. Lectures on the Greek Orators and Oratory.

German: *Herman and Dorothea—Goethe.*

French: *La Triade Française.*

Physics: *Pneumatics, Acoustics, Light, Heat, and Electricity.*

History: *History of England.*

Nat. Science: *Human Anatomy and Physiology, and Hygiene.*

Oratory: Lectures on Composition and Style. Essays, Discussions, Orations, and Elocution.

Third Term.

Latin: Cicero—De Natura Deorum. Lectures on Roman Religion and Mythology.

Metaphysics: *Logic.*

German: *Faust—Goethe.*

French: *L'Allemagne—De Staël.*

Physics: *Astronomy.*

History: *History of France and Germany.*

Oratory: Lectures on Composition and Style. Essays, Discussions, Orations, and Elocution.

Senior Year.—First Term.

Metaphysics: *Elements of Intellectual Science.*

English: *Study of Later English Authors, with Lectures.*

Nat. Science: *Geology.*

Civil Polity: *Lieber on Civil Liberty.*

Oratory: Lectures and Exercises in Elocution and Oratory.

† The subjects printed in italics are elective.

Second Term.

Metaphysics: Elements of Intellectual Science (half term).

Civil Polity: Political Economy.

Greek: *Sophocles--Ædipus Tyrannus. Plato--Phædo. Lectures on Greek Philosophy.*

History: *Constitutional History of the United States.*

Natural Science: *Advanced Work in any of the Sciences.*

Hebrew: *Davidson's Grammar (half term).*

Oratory: Lectures and Exercises in Elocution and Oratory.

Third Term.

Ethics: Moral Philosophy.

Hebrew: or } Davidson's Grammar continued. Selections from Genesis.

Christianity } Evidences of Christianity, with Lectures.

Art: *Outline History, with Lectures on the Principles and Philosophy of Art.*

Latin: *Lucretius. Lectures on Roman Schools of Philosophy.*

Pedagogics: *Lectures--Development of the Human Faculties. Organization, Grading, and Management of Schools. History of Education.*

History: *Guizot's History of Civilization.*

Oratory: A Thesis for Graduation.

Candidates for admission to the Freshman class who have pursued their preparatory studies elsewhere are examined in the following books and subjects, or their equivalents:

Latin Grammar, including Prosody.

Cæsar, two books.

Cicero, seven orations.

Vergil, three *Bucolics* and six books of the *Æneid*.

Jones's Latin Prose Composition, or equivalent.

Smith's *Smaller History of Greece, and of Rome*, or equivalent.

Greek Grammar, including Prosody.

Xenophon, *Anabasis*, three books.

* Homer, *Iliad*, two books.

Higher Arithmetic, including the Metric System.

Algebra, through Quadratic Equations.

Plane Geometry.

English Grammar and Geography.

Civil Government and United States History.

All candidates for advanced standing in this and the following courses are examined, in addition to the preparatory studies, in those already pursued by the class which they propose to enter.

SCIENTIFIC COURSE.

Freshman Year--First Term.

History (3 h.): Roman History and Geography.

Latin: Cicero. Exercises in Writing.

Mathematics: Algebra completed.

* In place of the Homer, the last six books of Vergil's *Æneid* or 2,000 lines of Ovid will be accepted.

* English : Essays, Discussions and Declamations. Drill in Elocution.

Second Term.

History (3 h.) : Greek, History and Geography.

Latin : Cicero. Exercises in Composition.

Mathematics : Geometry completed.

English : Essays, Discussions and Declamations. Drill in Elocution.

Third Term.

Latin : Cicero. Exercises in Composition.

Natural Science : Botany—Phænogams, with Laboratory work.

Mathematics : Trigonometry—Plane and Spherical.

English : Essays, Discussions and Declamations. Drill in Elocution.

Sophomore Year—First Term.

English : Rhetoric.

Natural Science : Inorganic Chemistry.

Mathematics : *Analytical Geometry.* †

French : *Grammar. Chardenal's First French Course.*

German : *Grammar. Stern's Studien und Plaudereien, First Series.*

English : Essays, Discussions and Declamations. Drill in Elocution.

Second Term.

Nat. Science: Inorganic Chemistry. Qualitative Analysis.

Zoölogy.

French: *Grammar. Sauveur's Causeries. Chardenal's French Exercises.*

German: *Grammar. Stern's Studien und Plaudereien, Second Series.*

English: Essays, Discussions, Declamations, and Orations. Drill in Elocution.

Third Term.

Mathematics: *Surveying and Field Work.*

Nat. Science: *Organic Chemistry. Qualitative Analysis, with a Course in the Determination of Minerals.*

Nat. Science: *Zoölogy.—Advanced Work.*

French: *Chardenal continued. Knapp's Modern French Prose.*

German: *Classics.*

English: Essays, Discussions, Declamations, and Orations. Drill in Elocution.

Junior Year.—First Term.

Physics: Mechanics and Hydrostatics.

Nat. Science: Botany—Physiological and Cryptogamic.

English: *Study of English Classics—Chaucer, Spenser, Shakespeare, Milton with Lectures.*

German: *Nathan der Weise—Lessing.*

French: *Picciola.*

History: *Ancient and Mediæval History.*

Oratory: Lectures on Composition and Style. Essays, Discussions, Orations, and Elocution.

* Lessons in the Bible and English, or oratory, weekly throughout the course.

† The subjects printed in italics are elective.

Second Term.

Physics: Pneumatics, Acoustics, Light, Heat, and Electricity.

Nat. Science: Human Anatomy and Physiology, and Hygiene.

German: *Herman und Dorothea—Goethe.*

French: *La Triade Francaise.*

History: *History of England.*

Oratory: Lectures on Composition and Style. Essays, Discussions, Orations, and Elocution.

Third Term.

Metaphysics: Logic.

Physics: Astronomy.

German: *Faust—Goethe.*

French: *L'Allemagne—De Staël.*

History: *History of France and Germany.*

Oratory: Lectures on Composition and Style. Essays, Discussions, Orations, and Elocution.

Senior Year.—First Term.

Metaphysics: Elements of Intellectual Science.

Nat. Science: Geology.

Civil Polity: *Lieber on Civil Liberty.*

English: *Study of Later English Authors, with Lectures.*

Oratory: Lectures and Exercises in Elocution and Oratory.

Second Term.

Metaphysics: Elements of Intellectual Science (half term).

Nat. Science: *Advanced Work in any of the Sciences.*

Civil Polity: *Political Economy.*

History: *Constitutional History of the United States.*

Oratory: Lectures and Exercises in Elocution and Oratory.

Third Term.

Ethics: Moral Philosophy.

Christianity: Evidences of Christianity, with Lectures.

Art: *Outline History, with Lectures on the Principles and Philosophy of Art.*

History: *Guizot's History of Civilization.*

Pedagogics: *Lectures—Development of the Human Faculties. Organization, Grading, and Management of Schools. History of Education.*

Oratory: A Thesis for Graduation.

Candidates for admission to this department must sustain a satisfactory examination in the subjects outlined in the Scientific and Literary Courses, Preparatory Department (see page 88).

LITERARY COURSE.

Freshman Year—First Term.

History (8 h.): Roman History and Geography.

Latin: Cicero. Exercises in Writing.

Mathematics: Algebra completed.

English: * Essays, Discussions, and Declamations. Drill in Elocution.

* Lessons in the Bible and English or Oratory, weekly, throughout the course.

Second Term.

History (8 h.) : Greek History and Geography.

Latin : Cicero. Exercises in Composition.

Mathematics : Geometry completed.

English : Essays, Discussions, and Declamations. Drill in Elocution.

Third Term.

Latin : Cicero. Exercises in Composition.

Natural Science : Botany—Phænogams, with Laboratory work.

Mathematics : Trigonometry—Plane and Spherical.

English : Essays, Discussions, and Declamations. Drill in Elocution.

Sophomore Year—First Term.

English : Rhetoric.

Latin : Vergil. Reading at sight. Composition.

French : *Grammar. Chardenal's First French Course.*†

German : *Grammar. Stern's Studien und Plaudereien, First Series.*

Mathematics : *Analytical Geometry.*

Natural Science : *Inorganic Chemistry.*

English : Essays, Discussions, and Declamations. Drill in Elocution.

Second Term.

English : History of English Literature.

Latin : Vergil. Reading at sight. Composition (Poetry into Prose).

French : *Grammar. Sauveur's Causeries. Chardenal's French Exercises.*

German : *Grammar. Stern's Studien und Plaudereien, Second Series.*

Natural Science : *Inorganic Chemistry. Qualitative Analysis.*

English : Essays, Discussions, Declamations and Orations. Drill in Elocution.

Third Term.

Latin : Vergil. Reading at sight. Reviews.

French : *Chardenal continued, Knapp's Modern French Prose.*

German : *Classics.*

Natural Science : *Zoölogy—Advanced Work.*

English : Essays, Discussions, Declamations and Orations. Drill in Elocution.

Junior Year—First Term.

German : *Nathan der Weise—Lessing.*

French : *Picciola.*

Physics : *Mechanics and Hydrostatics.*

Latin : *Livy. Studies in Military and Political Antiquities of Rome.*

English : *Study of English Classics—Chaucer, Spenser, Shakespeare, Milton, with Lectures.*

History : *Ancient and Mediæval History.*

Oratory : Lectures on Composition and Style. Essays, Discussions, Orations and Elocution.

† The subject printed in italics are elective.

Second Term.

German : *Herman und Dorothea—Goethe.*

French : *La Triade Française.*

Physics : *Pneumatics, Acoustics, Light, Heat and Electricity.*

Latin : *Horace—Odes. Catullus—Selections. Lectures on Roman Literature.*

Natural Science : *Human Anatomy and Physiology, and Hygiene.*

History : *History of England.*

Oratory : Lectures on Composition and Style. Essays, Discussions, Orations and Elocution.

Third Term.

Metaphysics: Logic.

German: *Faust—Goethe.*

French: *L'Allemagne—De Staël.*

Physics: *Astronomy.*

Latin: *Juvenal—Select Satires. Studies in the Institutions and History of the Roman Empire.*

History: *History of France and Germany.*

Oratory: Lectures on Composition and Style. Essays, Discussions, Orations, and Elocution.

Senior Year.—First Term.

Metaphysics: Elements of Intellectual Science.

Nat. Science: *Geology.*

Civil Polity: *Lieber on Civil Liberty.*

English: *Study of Later English Authors, with Lectures.*

Oratory: Lectures and Exercises in Elocution and Oratory.

Second Term.

Metaphysics: Elements of Intellectual Science (half term).

Civil Polity: Political Economy.

Natural Science: *Advanced Work in any of the Sciences.*

History: *Constitutional History of the United States.*

Oratory: Lectures and Exercises in Elocution and Oratory.

Third Term.

Ethics: Moral Philosophy.

Christianity: Evidences of Christianity, with Lectures.

Art: *Outline History, with Lectures on the Principles and Philosophy of Art.*

Latin: *Lucretius. Lectures on Roman Schools of Philosophy.*

History: *Guizot's History of Civilization.*

Pedagogics: *Lectures—Development of the Human Faculties. Organization, Grading, and Management of Schools. History of Education.*

Oratory: A Thesis for Graduation.

Candidates for admission to this department must sustain a satisfactory examination in the subjects outlined in the Scientific and Literary Courses, Preparatory Department.

COURSES OF STUDY.

PREPARATORY DEPARTMENT.

CLASSICAL COURSE.

Junior Year.—First Term.

English: Grammar and Analysis.

Latin: Grammar and Lessons.

Mathematics: Arithmetic.

English: * Spelling, Punctuation, Dictation, and Declamations.

Second Term.

English: Grammar and Analysis completed.

Latin: Grammar and Lessons. Selections from Cæsar. Exercises in Writing.

Mathematics: Arithmetic completed, including the Metric System.

English: Spelling, Development of Simple Themes, and Declamations.

Third Term.

History: History and Geography of the United States.

Latin: Cæsar. Exercises in Writing.

Government: Civil Government of the United States, with special reference to Michigan.

English: Spelling, Essays, and Declamations.

Middle Year—First Term.

Latin: Cicero—Selections. Exercises in Writing. Reading at sight.

Greek: Grammar and Lessons.

Mathematics: Algebra.

English: Essays, Written Discussions, and Declamations. Drill in Elocution.

Second Term.

Latin: Cicero. Exercises in Composition. Reading at sight.

Greek: Grammar and Lessons.

Mathematics: Algebra through Quadratic Equations.

English: Essays, Discussions, and Declamations. Drill in Elocution.

Third Term.

Latin: Cicero. Exercises in Composition. Reading at sight.

Greek: Grammar and Lessons. Xenophon—Coy's First Reader, forty pages.

Mathematics: Geometry (Plane).

English: Essays, Discussions, and Declamations. Drill in Elocution.

Senior Year—First Term.

Latin: Vergil. Exercises in Composition. Reading at sight.

Greek: Review of the Lessons. Xenophon—Coy's First Reader completed. Anabasis, Books I, II. Reading at sight. Composition.

History (3 h.): Roman History and Geography.

English: Essays, Discussions, and Declamations. Drill in Elocution.

* Lessons in the Bible and English, weekly, throughout the course.

Second Term.

Latin: Vergil. Composition (Poetry into Prose). Reading at Sight.

Greek: Xenophon—Anabasis, Books III, IV. Herodotus—Selections. Reading at sight. Composition.

History (8 h.): Greek History and Geography.

English: Essays, Discussions, Declamations, and Orations. Drill in Elocution.

Third Term.

Latin: Vergil. Reading at sight. Reviews.

Greek: Homer—Iliad, two books. Selections from Attic Prose. Reading at sight. Reviews.

English: A Thesis for Graduation.

SCIENTIFIC AND LITERARY COURSE.

Junior Year.—First Term.

English: Grammar and Analysis. Penmanship.

Mathematics: Arithmetic.

Geography: Political Geography.

English: * Spelling, Punctuation, Dictation, and Declamations.

Second Term.

English: Grammar and Analysis completed.

Mathematics: Arithmetic completed, including the Metric System, and Book-keeping.

English: Spelling, Development of Simple Themes, and Declamations.

Third Term.

History: History and Geography of the United States.

Government: Civil Government of the United States, with special reference to Michigan.

Drawing: Free-Hand and Geometrical Drawing.

English: Spelling, Essays, and Declamations.

Senior Year.—First Term.

Latin: Grammar and Lessons.

Mathematics: Algebra.

Natural Science: Physical Geography.

English: Essays, Written Discussions and Declamations. Drill in Elocution.

Second Term.

Latin: Grammar and Lessons. Selections from Cæsar. Exercises in Writing.

Mathematics: Algebra through Quadratic Equations.

Physics: Natural Philosophy (Elementary).

English: Essays, Discussions and Declamations. Drill in Elocution.

Third Term.

Latin: Cæsar. Exercises in Writing.

Mathematics: Geometry (Plane).

* Lessons in the Bible and English, weekly, throughout the course.

Natural Science : Physiology and Hygiene (Elementary).

English : Essays, Discussions, and Declamations. Drill in Elocution.

All candidates for advanced standing in these courses are examined in studies already pursued by the class they propose to enter.

ENGLISH COURSE.

First Year—First Term.

English Grammar. Arithmetic. Geography. Penmanship. * English—Spelling, Punctuation, Dictation, and Declamations.

Second Term.

English Grammar and Analysis. Arithmetic. Book-keeping. English—Spelling, Development of Simple Themes, and Declamations.

Third Term.

History of the United States. Civil Government. Drawing. English—Spelling, Essays, and Declamations.

Second Year—First Term.

Physical Geography. Rhetoric. Algebra. English—Essays, Written Discussions, Declamations, and Drill in Elocution.

Second Term.

Natural Philosophy. Zoölogy. Algebra. Vocal Music. English—Essays, Discussions, Declamations, and Drill in Elocution.

Third Term.

Geometry. Physiology. Botany. English—Essays, Discussions, Declamations, and Drill in Elocution.

Third Year—First Term.

Algebra. Botany. Chemistry. English—Essays, Discussions, Declamations, and Drill in Elocution.

Second Term.

Geometry. English Literature. † Chemistry. *Anatomy and Physiology*. English—Essays, Discussions, Declamations, Orations, and Drill in Elocution.

Third Term.

Logic. *Trigonometry*. Chemistry. *Advanced Methods*. English—Essays, Discussions, Declamations, Orations, and Drill in Elocution.

Fourth Year—First Term.

Analytical Geometry. History. Geology. Mental Philosophy. French. German. Oratory—Lectures on Composition and Style, Essays, Discussions, Orations, and Elocution.

Second Term.

History. Geology. Mental Philosophy. Political Economy. French. German. Oratory—Lectures on Composition and Style, Essays, Discussions, Orations, and Elocution.

* Lessons in the Bible and English or Oratory, weekly, throughout the course.

† The subjects printed in italics are elective.

Third Term.

Astronomy. History. Art. Surveying. French. German. Oratory—Essays, Discussions, Declamations, and Elocution.

NORMAL COURSES.

ENGLISH COURSE.

First Year.—First Term.

English Grammar. Arithmetic. Geography. Penmanship. Methods—Elementary Sounds, Primary Reading, and Language Lessons. *English—Spelling, Punctuation, Dictation, and Declamations.

Second Term.

English Grammar and Analysis. Arithmetic. Book-keeping English — Spelling, Development of Simple Themes, and Declamations.

Third Term.

History of the United States. Civil Government. Drawing. English—Spelling, Essays, and Declamations.

Second Year.—First Term.

Algebra. Physical Geography. Rhetoric. Methods — Class Work- English—Essays, Written Discussions, Declamations, and Drill in Elocution.

Second Term.

Algebra. Natural Philosophy. Zoölogy. Vocal Music. English—Essays, Discussions, Declamations, and Drill in Elocution.

Third Term.

Geometry. Physiology. Botany. English—Essays, Discussions, Declamations, and Drill in Elocution.

Third Year.—First Term.

Algebra. Methods—School Organization, Grading, and Management. †*Chemistry. German. Latin.* English—Essays, Discussions, Declamations, and Drill in Elocution.

Second Term.

Geometry. Chemistry. English Literature. German. Latin. English—Essays, Discussions, Declamations, and Drill in Elocution.

Third Term.

Logic. German. Latin. Chemistry. Methods—Development of the Human Faculties; Organization, Grading, and Management of Schools, and History of Education. English—Essays, Discussions, Declamations, and Drill in Elocution.

*Lessons in the Bible and English, weekly, throughout the course.

†The subjects printed in italics are elective.

LANGUAGE COURSE.

First Year—First Term.

English Grammar. Arithmetic. Geography. Penmanship. Methods—Elementary Sounds, Primary Reading and Language Lessons. * English—Spelling, Punctuation, Dictation and Declamations.

Second Term.

English Grammar and Analysis. Arithmetic. Book-keeping. English—Spelling, Development of Simple Themes and Declamations.

Third Term.

History of the United States. Civil Government. Drawing. English—Spelling, Essays and Declamations.

Second Year—First Term.

Algebra. Latin. Methods—Class Work. English—Essays, Written Discussions, Declamations and Drill in Elocution.

Second Term.

Algebra. Latin. Vocal Music. English—Essays, Discussions, Declamations and Drill in Elocution.

Third Term.

Geometry. Physiology. Latin. English—Essays, Discussions, Declamations and Drill in Elocution.

Third Year—First Term.

Algebra. Methods—School Organization, Grading and Management. † *Latin, French, Greek, German.* English—Essays, Discussions, Declamations and Drill in Elocution.

Second Term.

Geometry. *Latin. French. Greek. German.* English—Essays, Discussions, Declamations, Orations and Drill in Elocution.

Third Term.

Botany. *Latin. French. Greek. German.* English—Essays, Discussions, Declamations, Orations and Drill in Elocution.

Fourth Year—First Term.

Latin. Greek. Roman History. Geology. Rhetoric. Mental Philosophy. Oratory—Lectures on Composition and Style, Essays, Discussions, Orations, and Elocution.

Second Term.

Latin. Greek. Greek History. Chemistry. English Literature. Mental Philosophy. Oratory—Lectures on Composition and Style, Essays, Discussions, Orations, and Elocution.

Third Term.

Latin. Greek. Art. Chemistry. Moral Philosophy. Methods—Development of the Human Faculties; Organization, Grading, and Management of Schools, and History of Education. Oratory—Lectures on Composition and Style, Essays, Discussions, Orations, and Elocution.

* Lessons in the Bible and English or Oratory, weekly, throughout the course.

† The subjects printed in italics are elective.

BIBLE STUDY.

All students are required to attend weekly exercises for the study of the Bible. These exercises are held every Monday, 6:30-7:30 P. M., and the course of study is as follows :

First Year.

The study of the Bible in its more material form, as a part of every scholar's education. Origin, preservation, grand divisions, and sub-divisions, with relations of each to the other ; authors, books, and relative position, with name and brief analysis of each ; also a simple presentation of such questions as the term day, length of life, unity of the race, deluge, miracles, plagues, etc., to the end of founding the student in the Christian faith, rather than for the simple historical study.

The analysis of books this year is confined to the Old Testament.

Second Year.

The same general and special work in the New Testament ; together with the historical and logical connection between the Old and New Testaments.

Third Year.

The study of the principal characters of the Old Testament in the light of the Old Dispensation ; and the study of the characters of the New Testament, except Christ.

Fourth Year.

The study of Christ as set forth in the Gospels.

Fifth Year.

The planting and developing of the Jewish and Christian church, Covenants, and Ordinances.

Sixth Year.

Internal and external evidences of Christianity.

Seventh Year.

Doctrines and duties as set forth in the Old Testament and Pauline Epistles. The Shorter Catechism.

THE OLIVET CONSERVATORY OF MUSIC

was under the care of Prof. H. W. Dubee, as director, who fully justified the high expectations his coming raised. He aimed to cultivate the best music, classical and modern, and to raise the standard of achievement all along the line of his instruction. Through his influence a students' musical society was formed. Their main object is to make themselves acquainted with the best music.

THE ART DEPARTMENT

continued to prosper under the care of Mrs. Ella M. Kedzie, A. B. Pencil drawing in 24 lessons is free to all students. Those who wish to go farther can have instruction in perspective drawing, in charcoal drawing from casts and still life, in crayon drawing, embracing pictures and portraits ; in oil and water colors, comprising studies in still life, landscapes, flowers and figures ;

in china colors, embracing the decoration of china, vases, tiles and the like. A portable kiln is in use for the firing of porcelain. The department has shown steady progress from year to year.

THE LIBRARY

now contains about 16,000 well chosen volumes and about the same number of pamphlets. The increase is 1,000 volumes a year. By the will of the late Capt. Leonard Burrage, of North Leominster, Mass., the college is to receive \$20,000 for a library building. To this a friend of the institution has added \$5,000. A plan has been accepted and the building will go up in 1889. It will at the outset furnish room for 60,000 volumes. By slight changes in the interior, without enlarging its walls, its capacity can be increased to 110,000 volumes. And, later, when the growth of the library shall demand it, another book room can be added in the rear quite as accessible as the present one, giving a total capacity of 200,000 volumes.

MATHER HALL

for the first time afforded facilities almost ideally complete for studying the Natural Sciences.

The Chemical Laboratory is furnished with all modern appliances for experiment and investigation. The Olivet Museum holds a wealth of geological and mineralogical collections scientifically arranged. The Zoölogical Laboratory is furnished with cases proof against insects and dust, and contains one of the most complete zoölogical collections to be found in the west. The student there finds simple and compound microscopes, microtomes, polarizing instruments; in short, every appliance that he needs. The Meteorological Department is supplied with instruments which record the movement, direction and velocity of the air, its temperature, weight and moisture.

The financial report you have already received; thirty thousand dollars came to the College in gifts and legacies.

Very respectfully yours,

HORATIO Q. BUTTERFIELD,

President.

REPORT OF THE BOARD OF VISITORS.

HON. JOSEPH ESTABROOK,

Superintendent of Public Instruction:

DEAR SIR—Two members of your committee appointed to visit Olivet College were able to inspect the Institution during its term work, and to spend a brief time in various classes. It would seem to us that the excellent record for carefulness in fostering the moral development of its students is fully maintained by the College. The thoroughness and breadth of the teaching, notable in the departments of Greek, Biology and Normal work, cannot be too highly commended. So long has Olivet College maintained itself before the public as a conscientious and efficient trainer of youth that less emphasis need be laid on its routine work in these recurrent reports. What seems to your committee as worthy of more special mention, as a contribution

to the public encouragement, is the gratifying and phenomenal advance made by the College the past year in its equipments and endowments.

Our commonwealth may well be interested in those permanent academic foundations that will survive the age and life of their donors as working factors for the rising sons and daughters of the State. Hence we gladly report to that wider patronage of our fellow citizens that the large library, the admirably arranged and costly museum of natural history, the working laboratories of science and the general endowment all seem to have taken a stride forward the past year that becomes a matter of common weal and State pride to chronicle and enjoy. Your committee beg leave to put this single fact on record, in the belief that such factors in our State are civilizing and enlightening influences that we are not likely to overestimate.

Respectfully submitted,

D. M. FISK,

J. W. HUMPHREY,

Visitors.

SOMERVILLE SCHOOL.

REPORT OF THE BOARD OF VISITORS.

HON. JOSEPH ESTABROOK,

Superintendent of Public Instruction:

DEAR SIR—The undersigned members of the committee appointed to visit the Somerville School during the academic year 1887-8, beg leave to submit the following majority report, the third member of the committee being unable to act:

The school was visited on Friday, the 25th of May. Its site, upon high ground overlooking the St. Clair river, is unrivaled both in beauty and in healthfulness, and the extensive grounds are very attractive. The building, though in need of some repairs, is well adapted to its design, the rooms being large and comfortable. The heating is by steam, and all the household arrangements are unusually good. The dormitory is worthy of special mention for the taste and beauty displayed in its furnishing. The homelike atmosphere pervading the entire institution was very marked, and its moral tone seemed excellent.

Music and art are the specialties to which most of the energies of the school are directed. In each of them the equipment is unusually good and the teaching force superior. The art studio is the best we have seen, in all its appointments. It is to music and art, too, that most of the students are devoting themselves, to the exclusion of nearly all other lines of work. For a school having a full curriculum of academic studies, there seems to be decided over-development in that direction. Though there is nominal work done in academic studies, its general character is poor and its teaching inferior. The committee would recommend, for the interests of the school and its patrons, either that all academic work be dropped from the catalogue, and its development into a school of music and art be still further perfected, or that a vigorous effort be made to strengthen the teaching, raise the grade of work, and improve the facilities in those branches needing it, so as to make their excellence proportionate.

Respectfully submitted.

B. L. D'OUGE,
MRS. CORA D. MARTIN,
Board of Visitors.

SPRING ARBOR SEMINARY.

REPORT OF THE BOARD OF VISITORS.

HON. JOSEPH ESTABROOK,

Superintendent of Public Instruction:

DEAR SIR—I have just returned from the annual examinations and closing exercises of Spring Arbor Seminary, commencing June 12, closing June 19. The examinations, both oral and written, showed thorough teaching and training on the part of the teachers and faithful work done by the pupils. In the higher grades nearly all examinations were written. The questions were not puzzling, but required answers showing knowledge of principles, skill in solution and acquaintance with facts. I examined a number of papers, asking for some from the best and poorest students, then took others at random. I have never seen papers exhibiting on an average more thorough instruction and acquirement. The public exercises, including those of the preparatory, under graduates and graduates, were creditable to head and heart of teachers and students. The graduating class comprised one young lady and two young gentlemen. Their themes were well chosen and handled with simplicity, seriousness and dignity. The week closed with an able address to the Alumni on "Modern Greatness," by Mr. Barkworth, an earnest Christian, and one of the leading lawyers of southern Michigan.

The school is of a deeply religious character. The majority of the pupils are active Christians; their social meetings are a school of Christ. Simplicity of dress and manner is the rule. More genuine courtesy, from faculty down to smallest primary, would be hard to find. The school and most of the surrounding community are radically temperance. During my eight days' stay I neither saw nor smelt tobacco. No one using tobacco in any form is admitted to membership in their church. Students who use when entering find themselves in such a hopeless minority that they soon drop it.

I am so much pleased with the thoroughness of culture, simplicity of dress and manners, and genuine religious tone of the school that I shall heartily recommend it to patronage.

In rating my time I counted only the days of active work. I was cordially invited to remain at the public exercises, and, at something of a sacrifice, I did so that I might make a more complete estimate of the character of the school.

Mrs. Monroe was not in attendance, and Supt. Estabrook wisely took the every day working of the school.

This report is respectfully submitted for your consideration.

HARRIET B. JAYNES,

Visitor.

DECISIONS
OF THE
SUPREME COURT OF MICHIGAN
ON MATTERS OF
EDUCATIONAL INTEREST.

FILED DURING 1888.

SUPREME COURT DECISIONS.

I.

FORMATION OF NEW DISTRICT.

Gentle v. Board of School Inspectors.

1. Schools and School Districts—Annexation and Decision—Conclusiveness of Inspectors' Return. 2. Notice—Waiver. 3. Certiorari—Laches.

LONG, Justice.

This is a *certiorari* to the board of school inspectors of the township of Colfax, Wexford county, and to the clerk of said board, in the matter of their proceedings in setting off a new school district in said town, to be called "School District No. 8." The petitioner alleges that he is the assessor of School District, No. 3, and that said school district has heretofore been composed of the following territory, viz.: All of sections 1, 2, and 3; the E. $\frac{1}{4}$ of the E. $\frac{1}{4}$ of section 4; and the E. $\frac{1}{4}$ of the E. $\frac{1}{4}$ of section 9, all of sections 10, 11, and 12; the W. $\frac{1}{4}$ of the N. W. $\frac{1}{4}$ of section 14; and the entire N. $\frac{1}{4}$, and the N. $\frac{1}{4}$ of the S. $\frac{1}{4}$ of section 15. That no question of the legality of school district has ever been raised. That on the 10th day of December, 1887, the board of school inspectors of said township met and proceeded to form a new school district out of the territory formerly comprised in School District No. 3, and one other school district numbered two, and then and there pretended to form a new school district to be known as "District No. 8," composed of sections 3, 4, 9, and 10; and the N. $\frac{1}{4}$ of the N. $\frac{1}{4}$ of the S. $\frac{1}{4}$ of section 15; the E. $\frac{1}{4}$ of the N. E. $\frac{1}{4}$; and the N. E. $\frac{1}{4}$ of the S. E. $\frac{1}{4}$ of section 16. That said board then ordered that said new school district should elect its officers on the 20th day of December, 1887. That in pursuance of the action of said board of school inspectors certain parties assembled on said day and pretended to elect school officers for said new district, and who now claim to hold such offices. That by the action of said board of school inspectors said district No. 3 will be deprived of a large amount of money necessary to maintain the school therein during the present year. The petitioner then alleges that the action of the said board of school inspectors is illegal for the following reasons: (1). That no petition or application signed by a majority of the resident taxpayers of said districts numbered 2 and 3 was filed requesting such action. (2) That no consent from a majority of the resident taxpayers of said school district or either of them has ever been obtained by said board of school inspectors for a division of said district. (3) That no notice, such as the law prescribes, was ever posted in the districts to be affected by the action of said board. The board of school inspectors make return to the writ, and allege that on the 10th day of December, 1887, they organized the new school district No. 8, and that it is composed of the territory taken from districts Nos. 2 and 3, and by consent of a majority of the resident taxpayers of said

districts. The return then states: "This will appear by Exhibits 2 and 3 hereto attached, which exhibits are true copies of the files and records now in the office of the clerk of the board of school inspectors; and we do certify and return that the persons whose names are attached to such Exhibits 2 and 3 are resident taxpayers of said school districts, respectively, and a majority thereof. We do further certify and return that Exhibit four is a true copy of the original petition filed with the respondents, and that Exhibits 2 and 3 were considered therewith. We do further certify and return that on the 21st day of November, 1887, a notice of which Exhibit number 5 attached is a true copy, was posted in the most public places in each of the said school districts, and also in the territory proposed to be erected. We do further certify and return that the certificate of L. W. Gates, township clerk, was before said board, showing the posting of one notice each in the school districts to be affected by the change, and also one in the territory proposed to be erected into a new district, as appears in Exhibit No. 6, annexed. We do also certify and return that after the organization of school district No. 8, to-wit, on December 20, 1887, the voters of school district No. 8 met and elected officers of said school district, and that such election was held prior to the service of the writ of *certiorari* in this cause. We do further certify and return that a meeting of the voters of said school district No. 8, held on the 14th of January, 1888, and prior to the writ of *certiorari* in this cause, a resolution was passed authorizing the purchase of one acre of land for a school house site in said district, and a further resolution passed authorizing the issuing the bonds of said district for one year for the sum of \$300, as appears by Exhibit 8, attached; and that ever since the 20th day of December, 1887, said school district has exercised the franchises of a school district under the laws of the State of Michigan."

The first and second allegations of error may be considered together. Section 5041, Howell's Statutes, provides: "The inspectors may, in their discretion, detach the property of any person or persons from one district and attach it to another, except that no land which has been taxed for building a school house shall be set off into another school district for the period of three years thereafter, except by the consent of the owner thereof, and no district shall be divided into two or more districts without the consent of the majority of the resident taxpayers of said district, and no two or more districts can be consolidated without the consent of a majority of the resident taxpayers of each district." The first objection made to the proceedings is that the petition is not signed by a majority of the resident taxpayers of said districts two and three. This objection has no force. The statute does not require that the board of inspectors shall proceed only when a petition shall be presented. Section 5040 confers upon the board the right to act and provides: "Whenever the board of school inspectors shall contemplate an alteration of the boundaries of a district, the township clerk shall give at least ten days' notice of the time and place of the meeting of the inspectors, and the alterations proposed, by posting such notice in at least three public places in the township or townships, one of which notices shall be in each of the districts that may be affected by such alteration." It appears, however, that a petition was presented to the board, dated November 7, 1887, signed by thirteen legal voters of district No. 3, as appears by their consent afterwards filed with the board.

On November 12 a remonstrance was filed with the board signed by 17 legal voters of the school district No. 3. On the 21st of November the board took action upon the petition and required a notice to be posted as required by section 5040, *supra*, fixing the place of meeting of the board, and the time, as of November 30, and on that day set

off the territory from the two districts and erected district No. 8, and on December 10 caused a notice to be served on the taxable inhabitants of the new district as provided by law, fixing the boundaries of such district and describing the territory contained therein. On December 11 both of the districts 2 and 8 filed with the board their consent in writing to the formation of district No. 8, signed by a majority of the legal voters of each district, as appears by the exhibits presented on this record. The objection is that such consent filed by each of these districts does not state that the parties are a majority of the resident taxpayers of such district, and are therefore not in compliance with the statute. The returns made by the board of school inspectors, however, state that these persons are a majority of the resident taxpayers of these districts. This return is conclusive.

It is also objected that no legal notice was given of the meeting of the board of school inspectors to form such new district and no proof of such notice before the board at the time of its meeting. The notice was dated November 21 and posted on the same day, for a meeting of the board to be held November 30, at 1 o'clock P. M. This would not give the full 10 days required by section 5040 of the statute; but after such meeting was held and district eight erected, each of districts Nos. 2 and 8 consented to the action of the board in the formation of the new district, and filed such consent in writing with the board, signed as returned by the board by a majority of the resident taxpayers of each district. It is contended by counsel for the respondents that a majority of the resident taxpayers of the two districts having filed their consent in writing to the formation of the new district, and approving the action of the board of inspectors, it constitutes a waiver of any irregularity in the proceedings and in giving the notice required by the statute. The object of this notice is to enable parties whose interests may be affected to be heard before any action is taken, and such persons are entitled to 10 full days' notice of the time and place of the meeting. It will not do to say that, because a majority of the resident taxpayers have consented to the action taken by the board upon a notice fixing the time and place of meeting which falls short of the statutory requirements, the minority have no right to complain. The minority had a right to be heard before the board and had a right to the full 10 days' notice to appear. The notice of the meeting was jurisdictional, and should have been given, as required by law, for at least 10 full days before the day of meeting, and proof made of the posting in time and place specified in the statute. *Passage vs. Inspectors*, 19 Mich., 330; *Prescott vs. Patterson*, 44 Mich., 525, 7 N. W. Rep., 327; *Coulter vs. Inspectors*, 59 Mich., 391, 26 N. W. Rep., 649. It appears also that the notice designated sections three, four, nine and ten as all the land to be placed in the new school district, while the order made on November 30, at the formal meeting of the board, placed a large amount of other lands in the new district, some portions of which were not theretofore contained in either of the school districts two and three, and no notice was posted in the district out of which this was taken. The same question arose in *Passage vs. Inspectors*, *supra*, and such proceedings held bad. This is not alleged as error on the affidavit upon which the writ is issued, and therefore need not be considered here.

Some claim is made by counsel for respondent, that petitioner having delayed taking his writ until January 9, 1888, and his neglect in serving it until the 17th of January, after the organization of the new district was complete, the case should be ruled by *Parman v. Inspectors*, 49 Mich., 68, 12 N. W. Rep., 910. But in that case it was held that the objections against the proceedings did not appear to be jurisdictional but seemed to fall under the head of irregularities. Here the notice was jurisdictional,

and the time to be stated therein fixed by the statute. The action of the Board of School Inspectors must be set aside, quashed, and held for naught. Petitioner will recover costs.

The other justices concurred.

II.

CONSOLIDATION OF DISTRICTS—AUTHORITY OF ELECTORS TO DISSOLVE A DISTRICT.

Briggs v. Borden et al. School Inspectors. 1. Schools and School Districts—Dissolving Districts—Consent of Taxpayers. 2. Same—Illegal Vote—Injunction.

MORSE Justice.

The complainant is a resident and taxpayer of fractional school districts No. 6 and 7 of the townships of Brighton and Green Oak, and files his bill against the school inspectors of Green Oak, in which township the schoolhouse of said district is located, to restrain them from selling the said schoolhouse and school site, and also the wood and furniture belonging to said district. The property had been advertised for sale by the said inspectors, who claim that the school district has been disbanded and destroyed by the vote of the electors of the district and the action of the joint boards of school inspectors of the two townships. It appears from the record that, pursuant to a notice for a special school district meeting to vote upon a proposition to "dissolve" the district and attach its territory to surrounding districts, the electors of the district met on the 10th of May, 1887, and voted by ballot, 18 to 9, to disband the district. June 7, 1887, the boards of school inspectors of Green Oak and Brighton met, and upon a petition presented for that purpose, and upon the reading of the minutes of the school district meeting, showing the vote as aforesaid, resolved to grant the request of said petitioners and attach the property of said district, after giving notice of a meeting to be held for that purpose, to several other districts. The boards again met in joint session June 30, 1887, and proceeded to divide up the territory of the district and attach it to five other districts in Green Oak and Brighton. The complainant alleges that this action was illegal and unauthorized, and that the district, in law, still exists the same as if no action looking to its dissolution had ever been taken. His averments to support his claim of illegality are :

First. That the school district meeting was held without the authority of law ; that the electors at such meeting had no authority to disband said district ; and that at said meeting many persons voted on the motion to disband who were not resident taxpayers of the district ; and that the vote was taken without proper or legal form, and that two ballots were taken, the result of said ballots materially differing.

Second. That the boards of school inspectors had no authority to disband said school district without the consent of a majority of the resident taxpayers of the district, which they did not have ; and that the apportionment of territory to the other school districts was without the consent of a majority of the taxpayers of said school districts, and therefore null and void. The defendants in their answer defend their selling of the property upon the ground that their action in detaching the lands comprising said school district and attaching the same to the other districts was legal and proper, and that the consent of the taxpayers of that district, or any of the districts, was not necessary ; but deny that a majority of the resident taxpayers of the disbanded district did not consent. They admit that they are proceeding to sell said school site, schoolhouse

and other school property, and claim that they have the right to do so because of the legal dissolution of said district. A demurrer clause is contained in the answer, and they claim the benefit of this defense as if they had demurred to the bill. The demurrer is general and denies that a case has been made by the bill. Upon hearing on pleadings and proofs, the court below dismissed the complainant's bill. He appeals to this court.

The power of the boards of school inspectors to destroy this district, by dividing it into two or more districts, is found in the statute. See Howell's Statutes, §§ 5033, 5041. In such case the board of school inspectors cannot act without the consent of a majority of the resident taxpayers of the district, nor can two or more districts be consolidated into one without the consent of the resident taxpayers of each district to be so consolidated. Id. § 5041. The school inspectors have power to alter boundaries of districts, and attach or detach persons or the property of any person or persons to or from any district; but no power is anywhere granted them to disband, dissolve or destroy a district save as restricted under section 5041, above referred to, as intimated in *Doxey v. Inspectors*, 35 N. W. Rep., 170-172. The school inspectors have no authority to divide up the district, and destroy it, without the consent of a majority of the resident taxpayers; nor can they destroy it by cutting it up into pieces, as in this case, and attaching all the territory to other districts, without such consent. The complainant claims that the action of the school district in voting to "disband" the district was illegal because there was no legal notice given and posted of such a meeting. We think the words "dissolve" and "disband" are of similar import, and that a vote taken to disband is supported by a notice of a meeting to be held to vote upon a proposition to dissolve the district. But we are satisfied with the truth of the allegation in the bill of complaint, that the consent of the majority of the resident taxpayers to the dissolution of the district was not obtained. At the school meeting a list of persons voting was kept. The vote was taken by ballot. There were 27 votes cast in all; 18 for the proposition to disband, and 9 against it. Every person present who had any of the qualifications of a voter at any school meeting, as named in the school laws, seems to have voted, without reference to sex, or whether he or she was a taxpayer resident in the district. Eleven women voted. From 10 to 15 persons who were not legal taxpayers voted, and most of them voted for the proposition to disband. Some of the legal voters of the district were not present, and some went away without voting. It is plain to us that the consent of a majority of the resident taxpayers of the district to this destruction of the district has never been obtained. In view of this fact it is not necessary to determine whether proper notices were given and posted of the meeting, or whether under our constitution as it now is, women could legally vote at the school meeting. We have no doubt of the right of the complainant to file this bill. The action of the school inspectors was void, and entirely without jurisdiction, and they were proceeding to sell the property of the district without authority. The complainant is a resident taxpayer of the district and interested in such property, and if the school inspectors are permitted to take this last step in the destruction of the district, the mischief and damage to him may be irreparable.

The decree of the court below dismissing this bill is reversed, and a decree granted complainant in this court restoring said district, and declaring the proceedings of the said inspectors to dissolve or disband the said district null and void, and perpetually restraining them from selling any of said district property under or by virtue of such

proceedings, or any other, save those that may have been legally taken heretofore to that end. Costs of both courts to complainant.

The other justices concurred.

III.

SPECIAL CERTIFICATES.

Lee v. School District No. 2.

1. Schools and School Districts—Teachers—Special Certificate—Power of Secretary of Board of Examiners. 2. Same—Examination—Constitution of Board.

MORSE, Justice.

The plaintiff in this suit on the 14th day of October, 1884, entered into the usual written contract with the officers of the defendant school district as a teacher. She was to teach nine months and receive therefor the sum of \$815. When she commenced teaching under this contract the plaintiff had no certificate received at a regular examination of the county board of school examiners, but was granted a special certificate by the secretary of the board, one J. E. Fair, under the statute as it was at the time and before the amendment of 1887. The statute provides as follows: "The secretary of the board of school examiners shall have power, upon personal examination satisfactory to himself, and subject to such rules and regulations as the board of school examiners may establish, to grant special certificates which shall license the holder thereof to teach in a specified district for which it shall be granted; but such certificate shall not continue in force beyond the time of the next public examination by the board of school examiners, and it shall not in any way exempt the teacher from a full examination before said board," How. St. § 5154. A general examination of teachers for the county was held October 30, 1884, of which plaintiff had notice, and which she attended. At such examination only two of the examiners were present. The place of the absent member was filled by one Mr. Stecker, who acted in his stead and took part in the examination. The plaintiff was on that day examined with others. After the examination was over the plaintiff was instructed by the secretary to go on with her school until she heard from the board, as it was undecided who should receive certificates. The board refused to grant her a certificate upon such examination, but on the 30th day of November, 1884, Mr. Fair, the secretary, without the knowledge or consent of the board, issued to her another special certificate upon which she taught until the 21st of the same month, when she was dismissed by the officers of the school district, and another teacher employed. Evidence was produced to show the ability and willingness of the plaintiff to continue the school until the end of her term, and of her inability to procure other employment. She was paid for the full time she actually taught the school, but she brought this suit to recover the balance of the \$815, claiming that she was entitled to the full contract price, as the district had no legal right to discharge her. It does not appear that she was discharged for any other cause than the lack of a proper certificate. The circuit judge instructed the jury to find for the school district, and judgment was entered for the defendant.

The judgment is right. The secretary had no authority, four days after the refusal of the board of examiners to grant plaintiff, upon examination, a certificate, to issue a special certificate to her. The certificate so issued was invalid. The school district had a right to the services of a competent teacher, and one who received the proper license

to teach under law. We cannot agree with the counsel for plaintiff that the State authorizes the secretary at any time, where no rules and regulations to the contrary are established by the board of school examiners, upon a personal examination to grant a special certificate, and that the second special certificate issued by him to the plaintiff was good until another public examination of teachers was held. To hold this, would authorize the secretary at any time to nullify the action of the board, and to make him in effect, the sole person under the law to judge of the qualification of teachers and to issue certificates. The object of the statute, evidently, was to bridge over the time between the commencement of a school and the next meeting of the board, as in the case of the first certificate issued to plaintiff. The intention is also plain that such certificate shall have life only to the time of such examination; and that if the applicant for a certificate is rejected, though holding a special one, she shall not be granted another special certificate immediately upon the heels of such examination.

The fact that one of the examiners did not participate in the examination of plaintiff or that an unauthorized person filled his place and took part in the proceedings of the board, cannot effect the situation of the plaintiff. A majority of the board acted and decided against her, and she cannot question the validity of such action in this suit. It cannot be said that no legal public examination took place, and it is not shown that the action of Mr. Stecker had anything to do with her failure to obtain a certificate upon such examination. The judgment is affirmed with costs.

The other justices concurred.

IV.

TEACHER'S CONTRACT—NORMAL SCHOOL CERTIFICATES.

Smith v. School District No. 2 of Pleasant Plains—Schools and School Districts—Qualification of Teachers.

MORSE, J.

The plaintiff was hired by the proper officers of the defendant school district as a teacher, and the contract prescribed by law in such cases was duly executed in writing, and signed by the proper persons. Under such contract the defendant taught the district school from September 13, 1886, until the 3d day of March, 1887, at which time the schoolhouse burned. She was employed for a term of nine months and was to be paid \$60 per month; such payment to be made on or before the 14th day of June, 1887. The next day after the burning of the schoolhouse the plaintiff notified the school officers that she wished to go on with the school, and held herself in readiness to perform her contract. At the time of the fire she had been paid \$338, a sum more than sufficient to cover the time she had taught. The school board notified her that she should not continue the school. She obtained no employment elsewhere and made no effort to secure any. On the 15th of June, 1887, she demanded the balance of her wages for the full term, \$207. Payment was refused. She brought suit in the Circuit Court for the County of Lake. The sole defense was that she was not a qualified teacher at the time of her employment and therefor could not recover. When she entered into the contract she was a graduate of the State Normal School and had in her possession a certificate from the Board of Instruction of said school, of which fact the School Board were informed. But this certificate was not filed in the office of the county board of school examiners until about October 30, 1886. At that time she was informed by one of the Examiners that it must be filed and handed it to him, and

he recorded it in the record book kept for that purpose by the Board of School Examiners. The statute provides that such certificate "shall serve as a legal certificate of qualification to teach in any of the schools of the State when a copy thereof shall have been filed or recorded in the office of the legal examining officer or officers of the county, township, city, or district." Howell's Statute, § 4069. This certificate cannot be annulled save by the board of instruction of the Normal School; but its effect can be suspended and the holder thereof stricken from the list of qualified teachers, by the legal examining officers. The Circuit Judge instructed to find for the plaintiff, facts being undisputed; and she recovered judgment for \$212.80, the full amount of her wages, and interest, less the payments made before the fire.

It is claimed by the counsel for the defendant that this statute is mandatory; that she was not a qualified teacher when the contract was made, and that therefore the contract was void in its inception, and that no subsequent filing of such contract nor ratification by the district officers of the contract could give such contract life or validity. In his brief the counsel reviews the legislation of this State from 1857 to the present time, and ably and ingeniously argues therefrom that the intention of the Legislature, as a matter of public policy, was to make this requirement a condition precedent to the right to teach; that the holding of the certificate is not enough, and confers no right as a qualified teacher upon the holder unless the same is filed with the proper officers. We do not consider it necessary to discuss this point, however. The plaintiff was paid by the district for the month and a half she taught before the filing of her certificate, and for nearly four months after. During the time for which she seeks to recover she was a qualified teacher under the strict terms of the statute, and she is as much entitled to her pay as she would have been had she actually taught until the end of her term. If she had actually taught the whole term the school district would not have been permitted to raise this technical point that her certificate was not filed until October 30, 1886. See *Crane v. Bennington*, 28 N. W. Rep. 107. Neither will they be allowed to do so under the circumstances of this case. We do not think the plaintiff was bound to look up any other school or endeavor to find other employment during the remainder of her term. It was not her duty to find work out of her vocation, and it was out of the season to obtain a situation as a school teacher. The judgment is affirmed with cost.

Sherwood, C. J., and Champlin, J., concurred; Campbell and Long J. J., did not sit.

V.

INABILITY OF DISTRICT BOARD TO SECURE QUALIFIED TEACHER.

State ex rel. Hale v. Risley, Moderator.

Schools and School Districts—Employment of Unqualified Teachers—Mandamus.

Mandamus will not lie on the action of one who has approved of the act complained of, to compel a moderator to bring suit on an assessor's bond for paying an order for the salary of a teacher not legally qualified and employed in case of necessity by a school board which is satisfied with her capacity to teach.

Petition for *mandamus*.

Prior to the fall of 1886 school district No. 1, Ross township, Kalamazoo county, had employed teachers without certificates, paying them from moneys raised by the district,

and at a special meeting held in November, 1883, on the statement of the relator, Luther V. Hale, who presided as moderator of the difficulty of hiring legally qualified teachers, the district board was instructed to employ such a qualified teacher if to be found, and if not, one not legally qualified. At the annual school meeting in 1886, over which relator presided, it was resolved by more than a two-thirds vote, "that if the district board hired a teacher who gave satisfaction, but failed to procure a certificate, he or she should be retained and paid out of any moneys raised in the district." Thereupon the board advertised for a teacher, and being unable to find one having the required certificate, and being anxious for school to open, employed a lady on trial for two weeks, during which time the patrons of the school were invited to visit the same and judge of her qualifications. She had taught in the public schools of the State for eight years and was intending to apply for a certificate of qualification at the first examination of teachers.

At the expiration of two weeks she had given entire satisfaction, and was employed by the board for four and one-half months, and continued to teach for three months, giving like satisfaction. Soon after commencing to teach she passed a satisfactory examination in all the required branches, only failing in arithmetic because she could not give the analysis, of which fact the school board was ignorant, her general standing being 90 out of a possible 100 per cent., and supposed a certificate would be granted until two or three weeks after the examination. On being informed of her failure the teacher was re-examined in arithmetic, the district board accompanying her for that purpose; and the inspector announced himself as perfectly satisfied with her competency to teach that branch of study, and that he would meet the other inspector on the following Saturday; and if he was satisfied a certificate would be issued, and requested the presence of the school board at such meeting. The members of the board attended and found that a petition had been filed against the granting of such certificate and were informed by the examiners that if a counter petition containing a greater number of names was filed, it would be granted; which was done, but on account of the disturbance thus created in the district the examiners finally declined to issue the certificate. In the meantime the teacher had continued her work and given satisfaction, the final decision of the examiners not being given until about the middle of December, 1886. On September 14, 1886, there remained in the district treasury \$50.61, of moneys raised in 1885 for teacher's wages, and on that day, \$114 was raised for a like purpose and \$12 for the contingent fund, making \$176.61 outside the primary school and one mill tax. On December 20, 1886, an order was drawn for \$120, the amount due said teacher, whereupon relator and others applied to the township board for the removal of the members of the district board for paying out such money, who appeared in answer to citation. A hearing was had and decision rendered that the money had not been improperly used and the proceeding was dismissed. Thereupon relator and six others applied in writing to the respondent, Geo. Risley, as moderator of said district, to bring suit on the assessor's bond for breach of its conditions in paying said order, and on his refusal made this application for a *mandamus*.

PER CURIAM. *Mandamus* is a discretionary writ, and will be allowed only in furtherance of justice upon a proper case presented. It will not be allowed where it is apparent that it is applied for to gratify the spite of a private individual, nor where the relator has instigated, authorized or approved of the act complained of. The relator in this case was moderator of the school district, and presided at a school district meeting

where the act was authorized for which he now asks a *mandamus* to compel suit upon the assessor's bond, because such act, as he alleges, was unlawful. It does not appear by his petition or from the return that he entered any protest or objection, but declared the resolution carried. We are not prepared to say that the payment of the school teacher under the circumstances was unlawful. The liability of a school district to pay a teacher for services actually rendered has been maintained by the following authorities: *School Dist. vs. Brown*, 55 Vt., 61; *School Dist. vs. Estes*, 13 Neb., 52, 18 N. W. Rep., 16; *Stockdale vs. School Dist.*, 47 Mich., 226. 10 N. W. Rep., 349; *Crane vs. School Dist.*, 61 Mich., 299, 28 N. W. Rep., 105. The general policy of the school law is that schools shall be taught by qualified teachers, but necessities may arise where this cannot be done. A district may be unable to find a qualified teacher. Where the employment of an unqualified teacher is a necessity, the school district is authorized to employ one who has not the proper certificate, if the school board are satisfied that the teacher is otherwise qualified, and to pay such teacher out of the moneys belonging to the district. But the primary school moneys and mill tax cannot be applied to that purpose. We think the return shows such a case of necessity, and the *mandamus* is denied with costs.

TRANSACTIONS
OF THE
MICHIGAN
STATE TEACHERS' ASSOCIATION
AT THE
THIRTY-EIGHTH ANNUAL MEETING
HELD AT
LANSING, MICH., DEC. 26, 27, AND 28, 1888.

STATE TEACHERS' ASSOCIATION.

Officers for 1888.

President.

E. P. CHURCH.....Greenville.

Vice Presidents.

W. D. CLIZBE.....Ionia.

P. M. PARKER.....Quincy.

Secretary.

E. C. THOMPSON.....East Saginaw.

Treasurer.

MRS. C. G. CHAFFEE.....Flint.

Executive Committee.

1885-8.

J. M. B. SILL.....Ypsilanti.

S. G. BURKHEAD.....Portland.

ELLA DEAN.....Grand Rapids.

1886-9.

I. N. DEMMON.....Ann Arbor.

H. N. FRENCH.....Kalamazoo.

MISS MARY E. FISH.....Greenville.

1887-90.

GEO. F. MOSHER.....Hillsdale.

MISS M. LOUISE JONES.....Charlotte.

AUSTIN GEORGE.....Ypsilanti.

Officers for 1889.

President.

L. R. FISKE.....Albion.

Vice Presidents.

A. E. HAYNES.....Hillsdale.

J. W. SIMMONS.....Dowagiac.

Secretary.

H. M. SLAUSON.....Coldwater.

Treasurer.

MISS MARY E. TILTON.....Lansing.

Executive Committee.

1886-9.

I. N. DEMMON.....Ann Arbor.

H. N. FRENCH.....Kalamazoo.

MISS MARY E. FISH.....Greenville.

1887-90.

GEO. F. MOSHER.....Hillsdale.

MISS M. LOUISE JONES.....Charlotte.

AUSTIN GEORGE.....Ypsilanti.

1888-91.

GEO. F. HUNTING.....Alma.

J. N. MCCALL.....Ithaca.

ORR SCHURTZ.....Charlotte.

MICHIGAN STATE TEACHERS' ASSOCIATION.

THE TRANSACTIONS OF THE THIRTY-EIGHTH ANNUAL MEETING.

Lansing, Tuesday, December 26, 1888.

EVENING SESSION.

Chorus, by Lansing High School Choir.
Prayer, Rev. C. H. Beale, Lansing.
Music, "Those Evening Bells," High School Quintette.
Address of Greeting, Pres. Jas. B. Angell, of the State University, who gave a most eloquent and happy speech.
Response, Supt. C. T. Grawn, Traverse City.
Music, Gentlemen's Quartette.
President's address, Supt. E. P. Church, Greenville.
Music, "When My Ship Comes In," High School Quartette.

THURSDAY MORNING.

Prayer, Hon. Ira Mayhew, Detroit.
Music, North Lansing Choir.
Paper, "Relation of Intelligence to Crime," Hon. Edwin Willits, President of Michigan Agricultural College.
Discussion, Supt. H. M. Slauson, Coldwater, Pres. Willits, Pres. Fiske, of Albion, Prof. Haynes, of Hillsdale, Prof. Barr.
Music, Lansing School Chorus, "Vine Gatherers."

Recess.

Gov. and Mrs. Luce invited teachers to informal reception in executive parlors this evening. Invitation accepted.

Supt. D. Howell explained difficulty of the workings of Reading Circle, and introduced the following resolution in behalf of the council:

Resolved, That the subject of Reading Circle be referred to the County Board of Examiners and Supt. of Public Instruction. Tabled.

Paper, "The Pupil in Society," Supt. W. D. Clizbe, Ionia.

Discussion, opened by Mary E. Fish, Greenville high school. Mr. Walbridge, Pres. Fiske, Prof. Fall, of Albion; Supt. Walker, Supt. Slauson, Supt. Ransom, Prin. Hathaway.

Committees appointed:

Resolutions—Prin. Hathaway, Raisin Valley; Supt. J. A. Stewart, Port Huron; Miss H. T. Fuller, Greenville; Prof. J. H. Drake, Ann Arbor; Supt. J. B. Estabrook, Montague.

Nominations—Prof. D. Fall, Albion; Supt. E. M. Russell, Battle Creek; Supt. H. C. Rankin, Lapeer; Prin. L. G. Gorton, Detroit; Supt. C. A. Gower, Lansing.

Reception—Pres. E. Willits, Agricultural College; Prof. H. King, Olivet; Supt. W. S. Perry, Ann Arbor; Supt. G. W. Walker, Adrian.

Music, Lansing School Chorus.

AFTERNOON.

Music, Instrumental Solo, "Saltarella," Miss Juna Todd.

Paper, "Moral Training in our Public Schools," Pres. Charles Scott, D. D., Pres. Hope College.

Discussion, Supt. J. G. Plowman, White Pigeon; Supt. George Barnes, Supt. W. S. Perry, Pres. L. R. Fiske, Prof. Haynes, Prof. J. Montgomery, H. K. Warren, Prof. George.

RECESS.

Paper, "The Natural Method in Teaching Language," Prof. Lewis Stuart, Alma College.

Discussion, Prof. B. L. D'Ooge, State Normal School; Prof. Lutes of Albion.

EVENING, 7:30 P. M.

Music, Mrs. Sophie Knight.

Address, "The Value of Classical Studies," Dean Alfred A. Wright of Boston. This was a very entertaining presentation of an old subject, the lecturer taking the ground that the ultimate end of education should be the up-building of christian character; that the value of a study should be measured by this canon. That the study of New Testament Greek yielded this result and should be pursued. No copy of this paper was received for publication.

Music, "Annie Laurie," Ladies' Quartette, Mrs. Rarrick, Mrs. Knight, Miss Nora Towne, and Mrs. Keyes.

FRIDAY MORNING, 9:00 A. M.

Music, "There Were Shepherds."

Prayer, Supt. J. G. Plowman, White Pigeon.

Music, Ladies' Quartette.

Secretary Thompson read the following message from Indiana Teachers' Association:

"Four hundred Hoosiers in council assembled send greetings to their fellow workers in Michigan. Lewis H. Jones, president."

On motion President Church sent the following reply:

Four hundred Michigan teachers gathered in convention return greeting to their co-workers in Indiana.

Paper, "Kindergarten Methods in Our Public Schools; What and How Much." Mary Lockwood, Alma.

Discussion, Supt. A. S. Hall, Cadillac; Prof. J. Goodison, Supt. Howell, Supt. McLean, H. C. Jones, Detroit; Supt. Olizbe, Supt. Burkhead, H. R. Pattengill, Miss Vandewalker, Ypsilanti; Miss Ross, Alma; Prof. A. George, Miss Mary Sherman, Mason; Supt. Howell, Supt. G. A. Parker, Fort Gratiot; Mrs. D. E. Wood, Englewood, Miss Orpha Satter e .

Music, Ladies' quartette.

Mr. Pattengill explained briefly the object of the Young Folks' Reading Circle.

Supt. Howell of Lansing, spoke of changing time of holding meeting to summer's vacation.

Prof. Strong not being able to be present the subject of Alcohol and Narcotics was presented by Miss Emma Loughnane, of Lapeer. Prof. A. E. Haynes, Supt. O. D. Thompson, Prof. Ira Mayhew, Prof. D. Fall, Supt. Clizbe, of Ionia; Miss Sherman.

In Senate Chamber, the College Men's Section in charge of President Angell.

Paper, "The Study of Physics," Prof. A. E. Haynes, Hillsdale College. Discussion opened by Prof. J. Montgomery, Kalamazoo College. Prof. A. E. Haynes, Prof. Montgomery, Prof. D. Fall, President Scott, of Hope College; President H. Q. Butterfield, Mr. A. J. Volland, of Grand Rapids; Mr. O. W. Carman, C. T. Grawn.

Paper, "Synthetic and Analytic Criticism. Prof. C. M. Gayley, Ann Arbor.

Resolution presented by President L. R. Fiske.

Resolved, That we express our appreciation of the plan inaugurated at this meeting of the State Teachers' Association of having a session for those engaged in the work of higher education, and recommend its continuance.

Adopted.

Adjournment.

GENERAL SESSION—AFTERNOON 2:00 O'CLOCK.

Music, Duet, Mrs. Rarrick and Miss Nora Towne.

Paper, Supt. J. W. Simmons, "Summer Normals, their place in our Educational System."

Discussion, Secretary Orr Schurtz, Eaton county; Supt. J. G. Plowman, White Pigeon; Supt. Burkhead, Hon. S. S. Babcock, Detroit; Rev. Dr. Fiske, Albion; Supt. Howell.

RECESS.

Paper, "The Township Unit in Our School System," Prof. S. D. Barr, Albion College.

Discussion, Supt. B. A. Hinsdale, Ann Arbor.

Mr. Pattengill offered the following resolution:

Resolved, That it is the sense of the State Teachers' Association of Michigan, in convention assembled, that the Township District System would be advantageous to the public schools of this State, and we earnestly recommend this system to the favorable attention of the legislature of our State, and ask them to pass a law looking to that end.

Adopted by a large and unanimous rising vote.

Resolution to pass reading circle work over to Superintendent of Public Instruction and county secretaries was tabled, and funds in its hands voted to the treasury of this association.

Report of Committee on Resolutions:

Resolved, That we, as an association, extend our sincere thanks to the president and other officers of the association for their efforts in making this meeting a success; to the Board of Control of the Capitol, and to the citizens of Lansing for courtesies extended.

Resolved, That we express our hearty appreciation of the eloquent and instructive address by Dean Alfred A. Wright; and of the excellent music furnished by the young people of Lansing.

Resolved, That we extend to Gov. Cyrus G. Luce and wife our thanks for the cordial reception given by them to the members of the State Teachers' Association.

Resolved, That we commend the Young Folks' Reading Circle to the pupils of the State.

Resolved, That in accordance with the recommendation of the President of this association we invite the officers of the Charitable and Reformatory Institutions of Michigan to take part in the annual meetings of the association; further, that we instruct our representative to the National Association to seek to bring the various State organizations into closer relation with the National Association of Teachers.

F. R. HATHAWAY.
J. A. STEWART.
J. B. ESTABROOK.
MISS H. T. FULLER.
J. H. DRAKE.

Preamble and resolutions offered by A. E. Haynes and passed unanimously:

In view of the fact of our learning that ex-Gov. Austin Blair has been thinking of writing his experience during the civil war, as Governor of Michigan, and because of his intimate relations during that interesting period with the immortal Lincoln and his cabinet,—under the title of "The Recollections of a War Governor," be it therefore

Resolved, By the Michigan State Teachers' Association assembled in its 38th annual session, that recognizing the eminent services of Mr. Blair for the preservation of liberty and union and his exceptional advantages for securing valuable historic information, we most respectfully and sincerely request him to carry out this worthy purpose.

REPORT OF THE TREASURER OF THE MICHIGAN STATE TEACHERS' ASSOCIATION, 1888.

Mrs. C. G. Chaffee in account with Michigan State Teachers' Association. DR.

1888.

March 27.	To amount from former treasurer.....	\$187 74
Dec. 28.	" annual fees received.....	108 50
" "	" interest on association funds.....	8 75
		————— \$299 99

Mrs. C. G. Chaffee in account with Michigan State Teachers' Association. CR.

Dec. 12.	By bill paid E. P. Church (Pres.) for circulars, programs, R. R. certificates, postage, express and telegrams.....	\$32 29
" 28.	" bill paid D. D. Thorp for membership cards.....	2 50
" 28.	" " " E. P. Church (Pres.) for R. R. certificates, postage, stationery and circulars.....	9 82
" "	" " " paid Dean Wright (lecturer).....	82 20
" "	" " " " for music for State Teachers' Association.....	25 00
" "	" " " " H. R. Pattengill for local notices.....	2 00
" "	" " " " for exchange.....	25
" "	" " " " for express and postage.....	35
" "	" " " " E. O. Thomson (Secretary) for postage, mailing, express, etc....	11 05
" "	" balance in treasury.....	134 53
		————— \$299 99

MRS. C. G. CHAFFEE, *Treasurer.*

Election of officers:

As it was apparently the unanimous choice of the convention, the Secretary was instructed to cast the ballot for Dr. L. R. Fiske, of Albion, for President of the Association.

The committee on nominations presented the following report which was adopted:

Your committee on nominations submit the following report:

For First Vice-President—A. E. Haynes, Hillsdale.

For Second Vice-President—J. W. Simmons, Dowagiac.

For Secretary—H. M. Slauson, Coldwater.

For Treasurer—Miss Mary E. Tilton, Lansing.

Executive Committee for three years—Dr. Geo. F. Hunting, Alma; J. N. McCall, Ithaca; Orr Schurtz, Charlotte. For one year to fill vacancy caused by removal from State of L. R. Halsey, Miss Mary E. Fish, Greenville.

Respectfully submitted,

DELOS FALL,
E. M. RUSSELL,
H. C. RANKIN,
MR. GORTON,
O. A. GOWER,

Committee.

Supt. Perry moved that the question of holding the meeting of the association in the summer at Bay View be left to the executive committee. Not concurred in.

On motion of Supt. Howell the association voted to print its proceedings and distribute usual number to members.

President Church thanked the association for their support and introduced the next president, Dr. Fiske, who spoke a few timely words, after which the association adjourned.

E. P. CHURCH,
President.
E. C. THOMPSON,
Secretary.

LIST OF MEMBERS.

Elizabeth Armstrong, Lapeer.
 Anna E. Arnolds, Quincy.
 R. S. Avann, Albion (Col.).
 Helen E. C. Balmer, Mt. Pleasant.
 Chas. E. Barr, Albion.
 S. D. Barr, Albion.
 H. H. Barton, Ryerson.
 Eva Bates, Hastings.
 W. J. Beal, Agricultural College.
 A. L. Bemis, Nashville.
 B. Bennett, West Branch.
 E. L. Briggs, Grand Haven.
 J. J. Bronson, St. Joseph.
 Giles T. Brown, Ithaca.
 P. M. Brown, Big Rapids.
 Jas. Bryant, Bellevue.
 Florence E. Buck, Kalamazoo.
 B. F. Buck, Buchanan.
 Miss Viola N. Buell, Kalamazoo.
 S. G. Burkhead, Howell.
 H. Q. Butterfield, Olivet.
 Mrs. C. G. Chaffee, Flint.
 E. P. Church, Greenville.
 A. Clapp, Vicksburg.
 Gertrude Clark, Coldwater.
 F. E. Converse, Saranac.
 Miss H. E. Conrad, Grand Rapids.
 W. B. Crawford, Otisco.
 J. A. Crawford, Coral.
 Elnora Cuddeback, Hubbardston.
 Lida Cummings, Manistique.
 J. Cupples, Spring Lake.
 Nora Cutcheon, Spring Lake.
 H. H. Dodds, Mt. Pleasant.
 B. L. D'Ooge, Ypsilanti.
 W. A. Ellis, Bellfontaine School, Detroit.
 Allie Engell, Portland.
 J. B. Estabrook, Montague.
 Delos Fall, Albion.
 Kate Finch, Elsie.
 E. M. Fisher, Marine City.
 L. R. Fiske, Albion.
 Henry N. French, Kalamazoo.
 E. F. Gee, Vernon.
 Austin George, Ypsilanti.
 Marion L. Gerls, Pontiac.
 Homer E. Gordon, Unionville.
 C. T. Grawn, Traverse City.
 A. S. Hall, Cadillac.
 C. B. Hall, Detroit.
 Ella Hallock, Hastings.

Frederick Lutz, Albion College, Albion.
 Miss Ida A. Macklem, Quincy.
 Franc M. Macklem, Quincy.
 J. W. Matthews, Hastings.
 Miss Emma Mayhew, Detroit.
 Ira Mayhew, Detroit.
 Ellen Maxwell, Mt. Pleasant.
 Ray G. McDonald, Otisville.
 Miss Bertha McElheny, Bangor.
 Chas. M. McCran, Bangor.
 J. N. Mead, Midland.
 E. L. Mills, Chippewa Lake.
 J. Montgomery, Kalamazoo.
 W. A. Morse, Middleville.
 Flora A. Nicholson, Detroit.
 J. T. O'Keefe, Saginaw.
 G. A. Osinga, Otsego.
 P. M. Parker, Quincy.
 G. A. Parker, Ft. Gratiot.
 H. R. Pattengill, Lansing.
 Bella Paxton, Lansing.
 E. M. Plunkett, Ovid.
 W. S. Perry, Ann Arbor.
 J. G. Plowman, White Pigeon.
 Miss M. H. Prentiss, Saginaw.
 H. C. Rankin, Lapeer.
 N. A. Richards, St. Louis.
 Chas. M. Robbins, Litchfield.
 Antoinette Robson, Lansing.
 E. M. Russell, Battle Creek.
 Miss O. Satterlee, Kalamazoo.
 Orr Schurtz, Charlotte.
 Wesley Sears, Coldwater.
 John E. Thwaites, Albion.
 Prin. J. M. B. Sill, Ypsilanti.
 J. W. Simmons, Dowagiac.
 Jas. K. Skinner, Mt. Pleasant.
 H. M. Slauson, Coldwater.
 C. E. Smith, Schoolcraft.
 F. D. Smith, Fremontville.
 Chas. N. Sowers, Hart.
 Miss Nina M. Stephens, Oscoda.
 J. A. Stewart, Port Huron.
 Lewis Stuart, Alma.
 F. E. Stroup, Tawas City.
 Julia Sullivan, Lapeer.
 Nellie Sutton, Detroit.
 E. C. Thompson, Saginaw, 201 Washington street.
 O. D. Thompson, Romeo.
 S. B. Tobey, Norway.

D. H. Hammond, Charlotte.
Fred R. Hathaway, Adrian.
A. E. Haynes, Hillsdale.
M. L. Heartt, Hillsdale.
J. H. Hetley, Shelby.
E. Hinckley, Lawton.
Cora Hinman, Whitehall.
David Howell, Lansing.
Charles O. Hoyt, Grass Lake.
J. W. Humphrey, Holland.
Geo. F. Hunting, Alma.
Elizabeth Jeffreys, Portland.
H. G. Jones, Detroit.
H. King, Olivet.
A. Lodeman, Ypsilanti.
Emma Lott, Ypsilanti.
Emma Loughnane, Lapeer.

Nina C. Vandewalker, Ypsilanti.
A. J. Volland, Grand Rapids.
J. L. Wagner, Grand Ledge.
N. H. Walbridge, Evart.
Mrs. N. H. Walbridge, Evart.
Geo. W. Walker, Adrian.
E. C. Warner, Ypsilanti.
James Warnock, Douglass.
Francis J. West, Chase.
H. Kirk White, Fenton.
Pres. Willets, Lansing.
Jennie C. Wilson, Atlas.
Mary O. Wilson, Flint.
Mrs. D. E. Wood, Englewood, Ill.
Mary L. Wright, Quincy.
F. E. Young, Hart.

ADDRESS OF WELCOME.*

PRES. JAMES B. ANGELL OF THE STATE UNIVERSITY.

The president of the association has devolved on me the pleasant duty of welcoming the teachers of the State to their annual meeting. The greeting is already apparent. I am but the voice to speak the word of mutual welcome that comes from the heart of every one present and trembles on the lips ready for utterance. We have come already to enjoy ourselves. All have come from the Christmas festivities, and I sincerely hope that every one found his stocking full. We are all as glad as the children are that Santa Claus has been along. We are better off than our political friends who hung up their socks with the flattering prospect, in a majority of cases, of getting nothing in them.

We all are ready to take the good things of the papers and discussions which will be given here, but the social intercourse in store for us is of no less profit, and I say this with all due respect to the learned ladies and gentlemen who are to favor us with papers.

Mr. President, I believe that there is no class that has more right to be joyful—and none is more joyful—than has the teacher. The business man finds it almost impossible to lay aside the pressing cares of investments and business, but the teacher is not burdened beyond what he is able to bear as to what to do with his surplus earnings. The time is too short even to name the causes or consider the materials of the teacher's joy.

Let me for a moment call your attention to the material upon which we work. No artist ever had the like; no sculptor such marble, no painter such pigments. What can be equal to the mind and soul of children? As sensitive to speech as the æolian harp to the breezes of a summer evening. The slightest word may leave a lasting impression, like the ripples on the sand which thousand of years since were caught in the rocks, and to-day are fixed in the stones of the walks on which we tread.

Again what are the implements we use? What are the instruments in our art? The thoughts of the wisest men, and with reverence, we may say, the thoughts of God.

Teachers, what have you been doing in teaching the child the multiplication table? You have been giving him the material with which he can climb the loftiest heights of thought ever reached by Newton or LaPlace.

The log-cabin teacher who is now giving the little one his first lessons in

*Abstract of address at the 38th annual meeting of the State Teachers' Association. Dec. 27, 1888

the *a b abs*, is teaching him a language by which he may interrogate Socrates, Plato, Shakespeare, and Milton. What are the achievements of Raphael or Angelo, what is a Madonna, a David or a Moses compared with the products of our art? Ours is a nobler instrument than the artist's or the sculptor's and our work is nobler.

Our calling also serves to keep us young. We live with the young, think their thoughts, and look at things from the child's point of view — if you can't do this you are not fit to teach and should be turned out. The true teacher lives on the sunrise side of life; he never passes high noon. There never was a true teacher who became entirely old. Some grow gray, occasionally one is bald, but they are always young. They all catch the glow of happiness reflected from the beaming faces of the youth.

The teacher should moreover be happy as he considers the reflex influence of his calling. The good teacher ever strives to lead his pupils to high and lofty purposes, and these endeavors have their reflex influence on the teacher. Teacher's names are not numerous in police records, and few appear in columns of our papers among the reports of vice. Persons of low moral training are not drawn to this calling, but they are elevated by the influence of the profession. Our calling is then a peculiarly happy one. Let us acknowledge this always. I voice the welcome that everyone gives to all the rest.

RESPONSE.

SUPT. C. T. GAWN, TRAVERSE CITY.

To you, sir, in the name and on behalf of the State Teachers' Association, I would tender our sincere and grateful thanks for your eloquent word of greeting. From all parts of the State, we have assembled at this our Jerusalem in order to receive intellectual food and inspiration for the all important duties of the profession of which we are the representatives. We have come from the district schools, the village schools, the city schools, the denominational colleges, the Normal school and the University to sit in council upon some of the great educational problems of the day. We are here for enjoyment, for inspiration and for work. Some of us have come with the view of going into the pumping business for a few days, and can assure those who are to present papers at this meeting that we hope to pump them dry before the session closes.

The topics to be presented at this meeting cover a wide field, and are of interest to teachers of all grades, from the kindergarten to the University, and our deliberations cannot but result in great good to the cause of education.

And now, Mr. President, in responding further to the earnest greeting just voiced by the honored president of our great University, I speak in behalf of a body of men and women who have in their keeping the deepest and widest interests of this country. The time has at last come when the vital relation of education not only to the highest interests of society but also to material prosperity and civilization is recognized by all intelligent men and women.

The great value of our system of public schools lies in the fact that they awaken and intensify human desires, and not only this, these desires when once quickened impel men to effort in order to secure the means of their gratification. It has been said that the American people are the most industrious, enterprising and ingenious people on the face of the earth. I attribute this to the general culture and inspiration which our public schools give, worth infinitely more to the individual and to society, than any technical skill these institutions can give.

Education is the parent of industry and material prosperity, and as a result of its benign influence our land is filled with the hum of varied and multiplying forms of labor. In this age of marvelous inventions and improvement in all departments of human industry, we are apt to forget that before any of these material results came into existence they were born in the minds of men who had toiled and thought under the inspiration caught from the schools of our land. Out from our public schools have come the men who have made this nation the most industrious, the most prosperous, the most versatile nation on the earth. Yet in the face of these obvious facts we hear the charge which Bacon made against the schools of England in his time, that they were "filling the realm with idle, indigent and wanton people," repeated against the schools of the United States. No grosser misrepresentation was ever made, for statistics show that where education has done its work most universally and effectually there will be found the least idleness, the intensest industry and the greatest wealth.

Mr. President, we hope to go from this annual gathering to our respective fields of labor impressed with the importance of training our pupils to become strong, self-reliant, independent and free. Let us make education broad and generous, remembering that a broad and generous culture is often the antecedent cause that makes success in specific callings possible. Let us make education thoroughly human by developing all the God-given faculties and sympathies symmetrically. Let us make the broad foundations of our common schools full of vitality and energy. Let us labor to strengthen the relation existing between our common schools and our magnificent State institutions, happy in the thought that in this noble State there is no break in the chain from the kindergarten to the University. We are proud of our common schools, our Normal school, our colleges and our great University, broad, solid, and rearing high her pinnacles into the pure air of liberal thought and culture. We are proud of the institution under whose auspices we have assembled, because here teachers of all grades are brought into sympathy with each other; here the district school teacher can shake hands with the college professor; here we are made to feel that, however humble may be the position we occupy, we belong to the great brotherhood of teachers, the final result of whose labors will be the highest happiness of the individual, the peace and prosperity of nations, the dignity and glory of humanity.

PRESIDENT'S ADDRESS.

SUPT. E. P. CHURCH, GREENVILLE.

Ladies and gentlemen, members of the Michigan State Teachers' Association:

The completion of another year finds the teachers of our great commonwealth again assembled in annual convention. This yearly gathering of the educational forces of a State is a matter of profound import to our people. Influences will, or certainly should, go forth from these meetings that will affect our whole school system. As the devout Jews assembled from year to year in "the city of their solemnities," so earnest, thoughtful, progressive teachers in this State make an annual pilgrimage to our capital city. We come in part to sit at the feet of the doctors of the law, our seniors and superiors in the educational work; and in part to feel the hearty hand grasp of men and women who are earnest workers in a common cause. We come to see the friendly light of their benevolent countenances, that we may partake of their spirit and emulate their virtues. We come conscious of our individual defects, but reaching forward for something better. We gather with hearts loyal to our peninsular State, and equally loyal to our whole nation. To a full participation in the deliberations of this association we welcome the veterans of many years' experience, and the new recruits just donning the teacher's vestments. This is no secret order; there are no private sessions: there are no mysterious grips or passwords. "Welcome" is written over all our portals and inscribed on all our door-posts. To all, from the president and faculty of our State University, to the toilers in log schoolhouses, the invitation is "Come!" We all need advice, consultation and concert of action. As teachers in Michigan, our thoughts naturally turn first to our own State. It is probably safe to assert that this commonwealth is yet but in its infancy in respect to population, manufactures, commerce and in the development of its material resources. It is also as true, doubtless, that our schools and institutions of learning are as yet not far removed from an embryo state. "We know not what we shall be." With an extensive water-front affording large facilities for commerce; with a mineral wealth scarcely surpassed by any other of our sisterhood of States, and with forests equaled by none of them; with a soil rich in natural adaptation to yield abundantly all the products of this latitude; with a climate healthful and invigorating; and with a habitable area larger than that of some of the kingdoms of Europe, Michigan has within itself almost the possibilities of an empire. In addition to these favoring circumstances, the very position of our State will bring us into intimate relations with the east, west and the great northwest. Our natural water-ways furnish means of cheap and rapid transit for the products of the west to the sea-board and to Europe. The great systems of railroads connecting the Atlantic with the Pacific already

belt our State. The great trans-continental lines of travel between western Europe and eastern Asia and the continent of Australia pass through our borders. We are easily connected with every part of our own land, and of the habitable globe. The products of the occident and the orient come to our doors, and their people walk our streets and make their homes among us, taking part in our business and affecting our social, political, intellectual and moral life. If a line were drawn across this State from east to west, passing through the city of Lansing, it would be found that nearly half of our population resides south of that line. All of our colleges, except the one most recently founded, are south of the same line. To the north of this line is a vast area capable of supporting a population more dense than is now found on our southern border. Already the population of Michigan, which is about 2,000,000, exceeds that of Massachusetts, and when our people shall be as numerous per square mile as hers, we shall number twelve and one-half millions. The area of this State is nearly as large as that of England, and her population is estimated at about 24,000,000; and when this State shall be as thickly peopled per square mile as is the average in the British Islands, our enumeration will exceed 15,000,000. And this probably does not exceed the possibilities of the case.

Now, the important fact connected with all this is, that this is a republican government, a government by the people, and one of the essential conditions of success and perpetuity in a popular government is intelligence in the mass of its citizens. It is not sufficient that a few prominent leaders be intelligent. Every voter needs the clear insight and foresight acquired by thoughtful culture and mental discipline; for every voter is in a sense a legislator, and a part of the judiciary and executive departments of the State. Few things are so costly, so wasteful, so lacking in economy to our people as ignorance. As the population of our State enlarges this will be increasingly true. Right here the power of able teachers, good schools and sound learning must be felt. Our schools must be in great part the agency that will avert the dangers that threaten us on every hand.

Although this is the 38th anniversary of this Association, we are still laying foundations. Already the misguided, wasteful contest between labor and capital distracts and paralyzes almost every great industry, and seriously imperils all smaller ones in many of our neighboring States, especially in the great cities. We, as a State, have enjoyed a fair degree of exemption from this evil, partly because we have no large cities, and partly because we have not yet a crowded population. With increasing numbers, and the introduction of a large foreign element, this calamity will surely come within our borders, unless we prevent it by more general education, showing both parties that there is no natural contest between labor and capital; that the harmonious union of the two is equally essential to the prosperity of the possessor of money and the owner of muscle. Our people must be taught that the "strike" will not adjust differences between laborer and employer; that it entails upon wage earners the heaviest loss and burden that they bear. Here is a proper sphere for the work of the schools, to teach the principles of sound economy to all the children in the State. This is in the line of "practical education," that is so much desired by many. By a law of our State we are required to teach the physiological effects of alcohol and narcotics in general. This is well and should not be neglected. But if the State has a right to prescribe what studies shall be pursued and what branches taught, it has a right to in-

sist that loyalty be taught, that patriotism be inculcated, that those principles that will tend to the preservation of our commonwealth, be instilled into the minds of the children. If a State has a right to exist at all, it has the added right to seek self-preservation by the promulgation of all principles and doctrines that are essential, or that contribute to its perpetuity, and to the prosperity and happiness of its inhabitants. The people of this good State have justly been proud of our educational system, based upon our common schools, whose upward grades converge and terminate in our great State University at Ann Arbor; but whose downward degrades end in the Reform School in Lansing and the penitentiary at Jackson. Our common school system, that we reckon as one of the bulwarks of our free institutions, must be placed on a foundation of everlasting granite, every stone of which is held in place by clasps and bands of imperishable steel. The recent experience of puritan Boston should admonish us to fore-arm ourselves against the unblushing audacity of the "saloon in politics," and the far-reaching, deep-scheming plots of unscrupulous Romanism directed against the public schools. Let the experience of great Chicago stimulate us to be vigilant in our efforts to Americanize, through the agency of our common schools, every foreigner who enters, and every child of foreign parents, born within the borders of our State. In this way, more effectually than in any other, probably, can we defend ourselves from the baneful effects of the pernicious doctrines of the "socialist," the "nihilist" and the "anarchist;" and, may I not say, of the Mormon? It has been said that "eternal vigilance is the price of liberty." May it not as truly be said that the everlasting continuance of our schools, and the unrestrained teaching of sound doctrines of patriotism, economy, Americanism and loyalty are essential to our perpetuity? The sad experience of other communities will surely come to us with the influx of an ignorant and conscienceless European population unless we fortify ourselves against these betimes by meeting the newly arrived immigrant with the open spelling book, history, science of government and principles of political economy, however simply and untechnically. We must gather his children into our schools, and pour out upon them our American ideas—"will he, nill he." We must insist upon intelligence in the head, and loyalty in the heart, before we place the ballot in their hands.

Indeed it would be eminently proper for this Association to inquire whether or not our law relating to compulsory education is efficiently enforced, and whether any additional legislation is necessary to secure a better compliance with its requirements. If we design to maintain our present form of government our motto must be, "Intelligence must be the pre-requisite to citizenship." Our daily papers inform us that the anarchists of Chicago have organized "Sunday schools" in saloons and adjacent rooms, into which they gather the children and instruct them in systematic disloyalty and hatred toward our government. Our watchword and battle-cry everywhere must be, "Educate the people, all the people, both native and foreign born." Probably it is true that our teachers and college faculties have not made themselves sufficiently felt in our educational legislation.

Almost all our school laws show the marks of unskilled hands. Who is so well qualified to make valuable suggestions in any department of our legislation, as those who are most familiar with the requirements of that department?

The presidents and faculties of our University and denominational col-

leges, and the teachers in our public schools, understand more thoroughly the educational defects and necessities of our State, than do our average legislators, and they should be heard in these matters. Nor should they always await an invitation before expressing an opinion. The interests of our educational system are in their hands, and as guardians of these most important interests, it is proper that they be forward to petition our legislature, and even urge that body to adopt any measure that promises to increase the efficiency of our schools. It will never do to be so modest as to make ourselves inefficient. No reference has been made thus far in this discussion to the importance of moral instruction as a saving power among our people.

This is not because small importance is attached to that agency, but because that part of the subject has been entrusted to worthier hands for treatment and presentation to this Association. It will perhaps not be amiss to say, that this form of instruction should not be left entirely to the mission, Sunday school, and church organizations. There is such an intimate connection between good citizenship and sound morality, between correct doctrines of political economy and righteousness, between statesmanship and godliness, that this part of an education should not be left to purely religious effort.

The spheres of the school and the church may and in many places do, lie in very close proximity, and in some instances their territories seem to have only an imaginary line of division, or even to overlap each other at times; but this is no disadvantage to either. Indeed each must supplement the work of the other in order to secure the best results. To the church must be left the subject of theology, but applied morality, the science of obligation and duty, on its manward side at least, comes properly into every form of education and instruction. Nor is it too much to say that to Christian education in its best sense we are to look for the best things that we desire for our people. Christian schools and colleges have always been the promoters and conservators of the best arts, literature, and civilization the world has ever seen, and we expect they will continue to be such as long as the world shall endure.

We cannot do better than to retain the Bible as a foundation of our teaching in morals, and we do well to be jealous of every attempt, from whatever source, to exclude it from our schools. The same influence that seeks to turn the Bible out of our common schools, if it succeed, will at the next breath taunt us with having Godless schools.

It is impossible to satisfy unreasonableness, but safe to retain the traditions of our Puritan-American fathers, on fundamental points. We believe the experiences of the past, the sound judgment of the present, and the hopes for the future of this State, with all its coming millions of population, demand this of us; and we believe the enlightened wisdom of this generation will not consent to formulate its educational theories on any foundation that leaves out a chief corner-stone.

If the conclusions to which we have come are correct, the work of our University, denominational colleges, Normal School, and all other institutions that train and equip teachers for their work, and that stand at the head of our educational system, and give direction largely to public sentiment in matters of education, is a most momentous one. The doctrines these institutions promulgate, both political and moral, the sentiments they inculcate, the theories of government they teach, will be disseminated far and

wide by the pupils they train, and thus their influence for good or ill will soon be multiplied a million fold. Our higher schools of to-day are shaping the characters of individual citizens and of states for a century to come.

No teachers ever stood in a more pivotal position than do those of this year of grace 1888. Nor is this true of the teachers of Michigan alone. What has been said of the prospective increase of population in this State, is as applicable to nearly all our States and Territories; certainly to all those situated in the southern, western, and northwestern portions of our national domain. The hordes of Europe and Asia are now coming in numbers sufficient to form a medium-sized city every month. Africa is already represented in America by six millions of her people. These diverse nationalities bring into different parts of our country their even more diverse views of personal liberty, education, family, and State, and national government. They come with tastes and sentiments anti-American, anti-republican, if not in some cases anti-civilized. They come with mental, moral, and physical disorders within and upon them. Never had a nation a mightier problem to grapple with, than has this American nation in its efforts to modify, harmonize, assimilate, and finally safely absorb into the body politic these discordant elements. Never have men and women been burdened with a more gigantic task than is imposed upon the teachers of these United States in this generation. To one standing at a distance and viewing the difficulties, the work seems almost hopeless, the burden too great to be lifted. But this work must be done. Our national preservation depends upon it. If we do not Americanize the foreigners they will de-Americanize our children. If we do not elevate and enlighten them, they will degrade, besot, and demoralize us. Every teacher of every grade, from University president to itinerant boarder in rural hamlet; from him who sits in upholstered chair in palatial apartments, to him who gathers his little flock within humble walls of unhewn logs, needs to be in heart and soul a plumed knight, a mailed crusader, sworn to defend sound morality, republican government, and the traditional institutions of our common country.

Every one of us needs to be as good as an angel, as strong as a Corliss engine, as brave as a martyr, and endowed with a portion of divine wisdom to be fitted for such a work as is laid upon the teachers of this age, in this country. If the responsibility seems burdensome, surely the inspiration is great. This is a formative period, a time of transition, in matters educational, as well as political; and in all important revolutions, the educational forces must take the lead, must direct.

In conclusion, I beg leave to make the following suggestions for our future annual meetings:

1. That our Association holds its meetings on the same general plan as heretofore.
2. That the College Men's Section be continued, and that our University and college faculties be most cordially invited to attend and participate in all the proceedings.
3. That provision be made for a section for our reformatory and charitable institutions, so that all the educational forces of the State may meet, and thus form an aggregation of influence not otherwise attainable.
4. That steps be taken to unite our State Association more intimately with the National Association, for all purposes of national interest.

RELATIONS OF INTELLIGENCE TO CRIME.

EDWIN WILLITS, PRESIDENT OF MICHIGAN AGRICULTURAL COLLEGE.

This paper is to be followed by one on the subject of "Moral training in our public schools." Hence the effort will be to treat this topic independently of affirmative moral training; to trace the effect, as far as possible, of mere intellectual powers or acquirements upon crime. It is manifest that it will be impossible absolutely to divorce the subject from moral questions, inasmuch as the word crime itself and its status in society implies a wrong and, in a degree, moral torpitude. The intellect acts as freely and as spontaneously upon moral questions as upon those that are generally classed as purely intellectual. A moral judgment is simply the intellect exercising its functions upon a moral question. The intuition is found in the impulse to classify acts or events as right or wrong. There are, then, two distinct lines of instruction and development—the one of the intellect pure and simple, which enables it the more efficiently to traverse all questions, including moral ones, and the other the moral faculty or conscience, to enable it to respond readily to conviction. Both the intellect and the moral faculty can be cultivated, and either may be unduly developed. A strong intellect and an obtuse moral faculty are the elements of lawlessness. A very sensitive conscience without a fair proportion of reason and intelligence is the basis of a morbid life and promotes fanaticism. There are cranks intellectual as well as cranks moral, honest anarchists, and there were God-fearing witch-burners. Our topic, then, deals with the effects of intellectual development upon character and asks whether this intelligence promotes or restrains crime.

After a century's experience in public education there are many still who believe that education, as given by our public school system, is a bane rather than a blessing, and it is being assailed by many on the one hand who believe that so far as the system is godless it is injurious, and on the other that there is a weak point in it aside from the moral and religious one. The founders of the system were a trifle obscure in their statements of the importance of popular education. The ordinance of 1787 declared that "religion, morality and knowledge being necessary to good government and the happiness of mankind, schools and the means of education shall be forever encouraged." Were the schools so to be forever encouraged to instruct in religion and morality as well as in knowledge? And were their importance in the order named? Gen. Lewis Cass, who was Governor of the Territory of Michigan from 1813 to 1831, and to whom our State owes so much, was one of the most active and emphatic advocates of education at the public

expense. "No wiser or juster tax," said he, in one of his messages, "can be levied, than one devoted to the education of the poor. Public opinion to be safe must be enlightened." What was to be the nature of this enlightenment? Was the "education of the poor," for which he was so solicitous, to exclude or to include religion and morality? Whatever its character, it was to be at public expense.

The plan adopted will aid in construing the meaning and dispel the obscurity. The schools established excluded all sectarian instruction, and in the main restricted the course of study to intellectual development and endowment. Incidentally, by example and monition, the morals that underlie the good order and discipline of the school, are daily and hourly taught and enforced, but there is no course of study provided and no class work organized that distinctly and affirmatively insists on instruction in religion or morals. Good moral character is a requisite in a qualified teacher, but it is rather on the principle that the teacher shall do no harm to the pupils rather than a qualification to impart instruction in morals; though in practice school officers have the power to decide what constitutes good moral character, so that the Mormon church in Utah, under a system practically identical with ours, excludes all gentiles. Many catholic schools discriminate against protestants, and occasionally some districts against catholics, claiming with much truth, that character has influence, example instructs and religious life converts.

Now, with a century's experience, what is the condition of affairs? Are our youth made better citizens, more law abiding, as a result of a practically universal education under our present system? Has crime been diminished in the ratio that this education and the intelligence of the people have increased? We have begun to study the subject in the direction of statistics, but up to date with no clear and positive conclusion. Statistics can be manipulated as well as the sacred scriptures to prove the point desired. On the one hand it is claimed that individual statistics show that our prisons are filled with illiteracy, while it is apparent that there is, as a whole, a degree of intelligence behind the bars which puts that outside, at times, upon its metal. On the other hand it is claimed that the people as a whole or as classes are more law abiding in proportion to their intelligence. But anarchists, socialists and communists cannot be justly classed as illiterate. There is no class in our midst or on the continent of Europe that is more aggressive in discussion. Agrarianism does not lack intelligence. Nihilism is not the progeny of ignorance, and dissatisfaction with the present order of things is not limited to the slums of our cities. Herr Most knows altogether too much, Henry George is a most accomplished dialectician, and Brook Farm was the home for a time of many, dreamers as they were, who have made a reputation in literature and culture. So that it is not settled that crime against life and property in the classes which at the present time are a cause of solicitude to society should be charged to ignorance.

Neither do statistics solve the problem when applied to communities. Nothing is more apparent than the disparity in general intelligence between the Northern and the Southern States of our Republic. Our public school system is the outgrowth of New England thought. The Massachusetts code of 1649 required every township to maintain a school for reading and writing, and every town of a hundred households a grammar school, with a teacher qualified to fit youth for the university, "it being," said the preamble, in

quaint phrase, "one chief project of that old deluder, Sathan, to keep men from the knowledge of the Scriptures, as in former times, keeping them in an unknown tongue, so in latter times, by persuading men from the use of tongues, so at least the true sense and meaning of the original might be clouded with the false glosses of saints seeming deceivers." Far different was the purpose south of the Potomac, as expressed by the Governor of Virginia in 1671. "I thank God," said he, "that there are no free schools nor printing, and I hope we shall not have these hundred years, for learning has brought disobedience, heresy and sects into the world and printing has developed them and libels against the best government. God keep us from both."

These two lines of thought traversed the continent. According to the census of 1880, of the white population, excluding the colored entirely, of the thirteen States south of the Potomac, nearly twenty-five in every hundred native born above ten years of age could not read and write, while north of that line, including the former slave States, Delaware, Maryland and Missouri, only about four in every hundred. There were 1,400,000 illiterate whites south of the Potomac and 3,200,000 illiterate colored. Is the calendar of crime in the South in any proportion to the illiteracy—six times as great among the whites, as compared with the Northern States, and sixteen times as great including the negroes? It is manifest that deducting the offenses of the whites against the revenues, which are in a large measure political, and the petty thieving and violations of the social and domestic virtues among the negroes, which offenses are to be charged to their former servile condition as well as to their ignorance, it is at least a debatable question whether the South can be justly charged with a greater proportion of crime than the North. In fact the controversy on this very point during the last session of Congress between two distinguished Senators, one from each section, may fairly be considered a draw game. Even the great alleged political crime of the suppression of the negro vote is truly political, and so far as can be discerned is sustained and perpetrated by the intelligence rather than the ignorance of her people.

But illiteracy is not an absolute standard of ignorance. Illustrations are many, both in history and in our own observation, of strong, practical men of forceful character, who were without any education in the common acceptation of the term. There is no invariable rule in the matter, though it must be conceded that these illustrations are the exception. In this regard the South has not the advantage of the North. Book learning is not as universal, neither is that learning which may come from observation and experience. The people of the Southern States travel less; there are hundreds of thousands who have never seen a locomotive, to whom a hamlet is a mighty city, and whose idea, as a recent writer has said, is that the hills and mountains where Jesus trod are but just beyond the hills and mountains that skirt their horizon. In all those qualities that go to make up general intelligence there is clearly less to be found than in the busy, bustling North, where attrition sharpens the faculties and where men absorb knowledge as the pores of the skin absorb nutrition and narcotics. Therefore intelligence of this character cannot supply the deficiency of the schools, and thereby account for the absence of an undue proportion of crime. It may be accounted for in altogether another circumstance, to be referred to hereafter, to wit, the fact that the population of the South is so largely rural.

For the foregoing reasons, we should not come to the hasty conclusion that

crime diminishes with intelligence and increases with ignorance. Comparisons do not always, from any one point, prove a theory. Conditions modify; the popular impulses inbred for generations control and restrain; the desire to better our condition and the inheritance and enjoyment of better things, including the cultivation of the senses, the intellect and the moral qualities; all combined, conspire to make up what we call civilization and to lift mankind out of and above criminal tendencies. In this elevation intelligence has a marked influence. Let us analyze this influence.

1. Intelligence changes the habits of the people and the character of its prevailing crimes. What are called the minor crimes—like petty thieving and many vices—almost disappear. There is less stealing in modern England than there was four hundred years ago, and this has been brought about, not alone by the more thorough administration of justice, but in part by the lack of the impulse to steal; not alone from moral and religious training, for the people in those times were more orthodox and more under the control of the clergy than to-day. The bear-baiting, boar-hunting, roystering squire who ran afield all day and drank himself under the table at night, who could not write his name, who had his menial clerk at one elbow to write and read his official correspondence and at his other his clown to minister to his coarse ribaldry, has wholly disappeared. English nobility to-day has its vices, but it is in the main clean, sober, well educated, intelligent and law abiding. Nothing is more clear to the student of social questions than that intelligence controls, modifies and subdues the animal passions. We find less gluttony, smaller families and more temperance among the educated and intelligent. There is a philosophical reason for this. A taste for literature and for science draws the mind away from the grosser passions. With what shall an ignorant man occupy himself but the gratification of his lusts and his appetites?

2. Intelligence dispels all that class of crimes which are the defensive ones. An ignorant man among intelligent men, is in a sense at the mercy of intelligence. He is aggrieved at those relations of society which seem to rob him of his rights. If in any way he can despoil his more prosperous neighbor he will regain only what is his due. This is at the bottom of more crime than is generally imagined. Men are at war with society, for one reason that they have no appreciative knowledge of its scope, its compromises of natural rights, and its obligations.

3. Intelligence gives a wider range of power to discriminate in all debatable course of action. It enables a man more clearly to traverse uncertain and untried social and economic problems. The reasons for laws and penalties are more clearly discerned, and their observance commends itself to his judgment. From time immemorial the ignorant people of a certain valley of South Carolina, shut in from the world by almost impassable roads over the mountains, were accustomed, from the fact that their coarse products could not be transported, to run their grain through the still, and thus in smaller compass "tote their crap" to market. When, after the close of the civil war, the internal revenue laws were applied to them, they could not understand their reason or the right. They supposed their constitutional rights were impaired, and they ran their illicit stills without regard to the law. Hundreds were hauled before the courts, and troops of them were sentenced to the penitentiary at Albany. Their representative in Congress deplored the situation, but he insisted that they had no conception of governmental revenues, and that they felt that they were being robbed to

line the pockets of the revenue officers. As intelligence increased, opposition diminished, and this line of offenses has almost disappeared. In a marked degree, all those laws classed as "mala prohibita" depend upon intelligence for their due observance. They are more easily enforced when the reasons for their enactment are fully understood.

An intelligent man is not as liable to be misled as an ignorant one. In matters of public policy he is safer and calls prudence into the deliberative council. Repeatedly the younger braves of a tribe have brought on an Indian war, under the false supposition that they could withstand the United States forces, when if they had had a just conception of the overwhelming odds against which they were to contend, they would not have gone on the war path.

So in the walks of private life, the man who is well stocked with intelligence is not the fit subject for delusion. Much might be said of the power of the demagogue over the ignorant man, but this paper deals with the relations of intelligence to crime, and not with beliefs and actions short of an overt offense, except when the belief tends to and the actions prepare the way to crime. Without question but for the ignorance of the converts to Mormonism, polygamy would have had a short race. Wat Tyler led an ignorant rabble. The iconoclasts of the Netherlands were an ignorant people led by a few who had the intelligence to play upon their fanaticism. The rank and file of every riotous assemblage are the deluded, led on generally by some "best citizens," as they are called. Intelligence is conservative, and in general law abiding. The exceptions are many, and this paper will close with the consideration of these exceptions and some suggestions as to their cause and the remedy.

Modern crime is largely the product of the cities. The problem of the government of our cities is the most difficult of the age. As I said on another occasion, "The vice and crime and corruption and squalor of our cities are appalling. Youthful vagabonds, hardened criminals, gamblers, pickpockets, pimps, burglars and defaulters are on the increase. These are all officered by intelligence; many of the rank and file are of rare intellect and education. An ignorant man may commit a personal crime, but only an intelligent man can organize it. Organized ignorance is organized intelligence. The 'cracksman' is a smarter man than the policeman—sometimes he is a better man. Whole streets reek with filth and vice, and children without moral cleanliness, savages in the midst of civilization. Now, what can be done with this all increasing, organized criminality? It is not ignorance that makes the problem difficult, for money can bring the school books to every one of them; it is a fact that the elements know too much already; that the educated 'gamin' may become the intelligent criminal; that the education may only sharpen the tools of his vicious activity. There is something the matter. What can be done?"

The regulation specific is to cultivate the moral sense, to supplement intellectual with moral training in our public schools. Undeniably this suggestion has great force, but does not cover the whole ground. Those who have had much to do with criminal character have noted that but few criminals are destitute of moral knowledge. As a rule they know they have done wrong. Many have had careful moral and religious training; they have "memorized the ten commandments;" they can conduct a theological controversy with skill and acumen. Some are really religious to a degree that

almost disarms suspicion of hypocrisy. Conditions have been adverse, so that the moral sense has not been developed, or the stress of temptation has been more than they could bear. Our worst class of criminals are not heathens. Moral training, therefore, will not be the sole remedy. Somehow the conditions must be changed.

We incidentally remarked while discussing the status of crime in the Southern States that one cause of their having a criminal calendar not in proportion to their want of general intelligence lies in the fact that their population is essentially rural. Our prison calendar, as heretofore stated, is mainly urban. What is the generic cause of this result? There are two causes, the first the facility afforded for the commission of crime and the possibility of association with the depraved. Crime likes company. Men are gregarious in evil and in well doing; they gravitate to the slums of iniquity and to the church altar. In the country the sparseness of the population in a large measure is adverse to companionship in evil. The conditions are hostile to concerted and organized crime.

The second cause, and the one which I beg leave to submit more at length, is the fact that in the country manual labor is the rule, is honorable; in the city men live in larger proportion by their wits. What relations have these two facts to crime?

We have seen that a large proportion of the criminal class have a knowledge of good morals and religion, and are reasonably well supplied with good precepts. But on the other hand comparatively few of them have a stated occupation. We have the authority of Ex-President Hayes, who has given much time and study to the subject, "that in one of the great prisons seven-eighths of the convicts had learned no trade; seven-eighths had no way of making an honest living and so became convicts." Another fact, says he, "that the great prison had so small a per cent. of convicts who could not read and write that it was hardly worth mentioning." Another authority on the subject of prisons states "that seven-tenths of our criminals in the State prisons never learned a trade nor followed an industrial pursuit." We might quote other authorities to the same effect, but it is needless. Our observation verifies the statements made. A large proportion of our convict population lives by its wits. They are intelligent, they have been educated to idleness and have grown up without habits of labor, or the ability to labor. We will quote further from Ex-President Hayes. "If," says he, "there is any specific for crime, in all its stages, it is labor. If the young of all conditions of life, of both sexes, were trained to industrious habits, taught some form of useful labor, if education gave them the love of labor, the spirit of labor, and the ability to labor, we should soon see the tide turn in our prison statistics." Again, "teach every boy in this country an honest trade by which he can make his living and you will greatly diminish the number of criminals." "Our present school system is admirable," he continues, "yet our girls and boys come out of these schools without any profound respect for labor or for the laborer, or with a willingness to make a living by the labor of their hands. There is the weak point of the present system."

But what has this to do with the subject, "Relations of Intelligence to Crime?" It has everything. It is a mistaken idea that learning a trade is not education, that the ability to work at some useful occupation does not enter into and compose an essential part of a man's intelligence. You remember what Ruskin says: "A boy cannot learn to make a straight shaving off

a plank or drive a fine curve without faltering, or to lay a brick level in the mortar, without learning a multitude of other matters which lip of man could never teach him." A man that can shoe a horse well knows more than the man holding the bridle. Skill is intelligence applied, and applied intelligence counts for more in the world than stores of knowledge unapplied. Give a man both knowledge and skill, and you have a well-rounded intelligence; these, with a moral and religious training, will do much to keep him outside the prison walls, outside the criminal class.

Give the city boy something to do, systematic daily labor, and take him off the sidewalk, and you may diminish your prisons one-half. Give him something that requires skill and knowledge, full intelligence. Busy fingers rarely steal. Sin of all kinds is the product, generally, of the unoccupied mind and heart and hand of man. If St. Anthony had washed himself at least once a week, had discarded his hair shirt and turned his cell into a workshop, he would have seen no devils to fight. The best way to cool off a passion or control an appetite is to side track it into some laudable industry.

DISCUSSION.

SUPT. H. M. SLAUSON said:—With the able paper to which we have all listened with so much interest I must in the main agree. Doubtless it is the height of presumption on my part to differ upon any point, yet some difference of opinion seems necessary in order that there may be interest in the discussion that is to follow. Two or three unimportant and weak points advanced now may afford amusement to succeeding speakers and relieve them of the need of vain attack upon the more important and stronger points of the paper.

Most truthfully have we been told that, "After a century's experience in public education there are many still who believe that education, as given by our public school system, is a bane rather than a blessing, and it is being assailed by many on the one hand who believe that so far as the system is godless it is injurious, and, on the other, that there is a weak point in it aside from the moral and religious one."

That there is a weak point, yes, several of them, doubtless we shall all agree. Our presence here is evidence of such belief, and also of a desire to strengthen those weak points. We may not, however, agree so generally as to the location of the weakness, whether it is to be found in the system or in the administration of that system. It is not necessary to answer this question in order to know what is the duty of the friends of education, but before they can discharge that duty they certainly must know, not only the seat of the evil, but also its exact nature.

These questions are put to us: "Now, with a century's experience, what is the condition of affairs? Are our youth made better citizens, more law abiding, as a result of a practically universal education under our present system? Has crime been diminished in the ratio that this education and the intelligence of the people have increased?"

To the first question I firmly believe that you will all answer yes. Our youth are better and more law-abiding citizens as a result of our educational system.

In the report of the Commissioner of Education for 1878 reference is made to two counties in Missouri. In each of these the fund received from the State in aid of education was about the same; but in one there was raised for educational purposes by local taxation \$8 per capita of the school population. This county, with a population six times as great as that of the other, cost the State less than one-eighth as much for criminal prosecutions. Let us grant this to be an extreme case and confined to a com-

paratively small area. Other cases of similar import are given in the same report, and after a comparison of the expenditures for education and criminal prosecutions in the city of St. Louis, this conclusion is drawn: "Intelligent communities have found that education is the cheap defense of cities as well as of nations."

If our youth who have received the benefits of our system of education are *not* more law abiding in consequence of it, they ought to be found in as great proportion in our prisons as in the general population of the country.

In the report of an international penitentiary congress, held in Baltimore, this statement occurs: "The general condition of prisoners in the United States, in point of education, is low as compared with the whole population of the country. * * * About half of the prisoners now (1872) in confinement are practically without education and a large proportion of the remainder possess it to only a very limited extent."

In the report of the conference of charities and corrections for 1885, we are told that: "A comparison of illiteracy, as shown by the census of 1870, with the per cent. of criminals in New York and Pennsylvania, shows that the illiterates furnish twelve times as many criminals as an equal number of not-illiterates do."

To the second question, "Has crime been diminished in the ratio that this education and the intelligence of the people have increased?" we must answer mournfully, no. If statistics are worth anything, they show that the total amount of crime doubles every decade, and that the number of criminals to each thousand of population in the United States doubled between 1850 and 1880.

But is this the result of education proceeding from our public school system, or is it because a large majority of those who have broken the laws have never been, for any considerable time, brought under the direct influence of that system? (C. D. Randall, circular of information No. 2, '80, p. 21.) One of the best authorities upon such matters in our own State, in a paper read before the Department of Superintendence at its meeting in February, 1880, said: "Gather statistics from whatever State or country you choose, and they all demonstrate that from dependent children, orphans, half orphans, children of pauper, criminal, or intemperate parents, come the paupers and criminals that are supported by the public."

In reports on the causes of crime received from Mexico and twelve European countries at the International Penitentiary Congress of 1872, nine correspondents placed defective or malign education at the head of the list, two counted it as among the chief and only two failed to mention it at all.

In all schemes for the prevention of crime or the reformation of criminals, education appears to be the corner stone.

As to the comparison of the criminal calendars of the northern and southern States, the lack of large cities in the south certainly should be credited with a considerable portion of the apparent difference and I would not wish to gainsay the statement that in the country labor is held as honorable. But this, certainly, would in no way account for the difference referred to in the two sections of the country. (I scarcely think that Pres. Willits intended to be so understood), for we all know that throughout our national history labor has been held more in honor at the North than at the South. Is not this discrepancy to be accounted for on the ground that many crimes committed in the South have never been recorded in any legal calendar? The enforcement of the laws resting in the hands of the community, the more ignorant and lawless the community the greater the probability that crime will go unrecorded. Convictions for infringement of the liquor laws of this State are rare in the Upper Peninsula, but that fact is not wholly

due to a lack of violation of the law. Brief calendars are not always proof of paucity of crime.

The paper has given us a wise caution concerning hasty conclusions from statistics. Along side the statements quoted from Ex-President Hayes let us place some from that report of charities and corrections previously referred to. In the State of Pennsylvania 35 per cent. of the population were classed as industrial by the census of 1870. Of the criminals in the State prison between 1860 and 1870, 24 per cent. had been apprenticed to learn some trade. To put the matter in its simplest form the apprenticed furnished two-thirds of their quota of criminals and the educated one-third of their quota. Please do not consider that this is advanced under the impression that it proves general or ordinary education twice as effectual in the prevention of crime as the learning of a trade. Before any such conclusion could be drawn from it, we should know the early associations of those persons who had been apprenticed and whether those associations had, in any way, been the cause of the later violation of the law. May we not, however, conclude that the learning of a trade is no more of a prevention of crime than the public school? And may we not conclude, also, that under some circumstances, it would be wise to combine the education of the common school with that of the learning of a trade? I say, "under some circumstances," because in the minds of many there are grave doubts as to the wisdom of a general teaching of trades. Again, we are told by some of the most zealous advocates of industrial training that its only substantial basis is what is generally included in the instruction of a good common school.

As has been shown, the cities are most prolific of criminals. If education of any kind is to act as a prevention of crime it must not only be brought within the reach of prospective criminals, but they must be induced or compelled to profit by it. A table compiled from the census of 1880 shows that in 86 cities of the Union the attendance at the public schools was only two-fifths of the population of school age, and that in 84 of the 86 cities less than half of the school population had attended the public schools for even a day. For the entire country, the average attendance is but little more than one-third of the school population. Couple with this the fact that in hundreds, yes, thousands, of country schools three or four months count as a school year, and it seems fair to question whether we do have "practically universal education under our present system." Is not the greatest need of the nation, so far as educational matters are concerned, something that will bring into our public schools the boys and girls that ought to be there? When they are there, let them be taught as some one has said, "To think, to work, to behave, and to love their country."

PRES. L. R. FISKE said: The disinclination of the members of the Association to engage in the discussion of this subject evidently grows out of two facts. (1) The problem is a very complex one, so that it is very difficult to reach conclusions that are certain. (2) Both papers presented have given us a very discriminating treatment of the subject. I think it is evident that there is a larger percentage of petty crimes committed by the illiterate classes than by the educated. But in these cases is crime due to lack of intelligence or the absence of intelligence due to criminal tendencies and associations? Or are illiteracy and crime both—and in common—the product of some other cause working out these results? Perhaps in a limited degree an affirmative answer could be given to each of these three questions. Who can unravel the influences which act upon human life and assign a definite value to each force of action?

That intelligence is not an adequate bar to crime must be apparent to everyone. The

great criminals are mostly persons of a high grade of intelligence. Technical or professional knowledge often supplies the very conditions of crime. It is the skillful bank clerk or cashier that absconds. It is the man who has the greatest knowledge of the means of successful gambling who takes it up as a profession. The burglar takes advantage of knowledge which the ordinary citizen does not possess to make his way into his neighbor's dwelling or bank or other place of business for pillage. Indeed, is it not true that in all ages intelligence has been the avenue and inspiration of crime? Men of superior mental powers, due perhaps largely to greater intelligence than others possess, have been the leaders in the criminal movements of successive ages. Ambition is sure to fill the heart of that man who is conscious of unusual intellectual capabilities, and this ambition links itself with selfishness, and the result is that for personal ends rights are trampled under foot, and crimes, not only against individuals but against nations and even humanity itself—crimes whose breadth and blackness words cannot portray—are committed. Is he a murderer who kills a man on the street that he may get his purse, and that military chieftain who, in order to satisfy his ambition, organizes an army, leads it into battle, slays his thousands, breaks up innumerable homes, overthrows governments, trampling under his feet the rights of all who come in his way—is this man simply a hero, not a murderer, not a traitor to humanity? The leaders in crime are the men who, by virtue of intelligence and distinguished mental powers, have thrown disorder into society and most widely carried havoc and ruin wherever they have gone. The race needs to be intelligent, but something more is required to prevent crime and insure general respect for human rights.

THE PUPIL IN SOCIETY.

BY SUPERINTENDENT W. D. CLIZBE, IONIA.

To just what extent the moral and social training of the home should become co-extensive with that of the school has long been discussed and never satisfactorily decided.

The mother must show the infant child that it is wrong to tell a falsehood and that it is not polite to talk improperly to others, etc. When he has grown older the same lessons are taught him in school. The school, as I look upon it, is nearly what might be called an enlargement of an intelligent family. The happy school is a happy family where numerous social customs will be observed as a natural outcome of the golden rule. If a school has a careless or rude teacher, the pupils will probably lack the desire to observe certain of the common rules of society. Good manners, however, come from or are the product of a true heart. Simply telling is not enough to cause children to act gentlemanly on the street. The idea must take deeper root and enter the very heart. The model teacher assists materially in accomplishing this result.

There seems to be a great tendency on the part of some to introduce children into real society very early. Some parents desire their children to appear bright and forward, and, in carrying out this design, fall into that very serious error of supposing that society small-talk is symbolical of brilliant intellect. The habit of being satisfied with the chaff of personal intercourse doubtless paves the way to cheating them out of the real substance that should be enjoyed by them in later years.

That which causes considerable trouble in grades below the high school is the birthday party. Every child, as far as I know, has a birthday and not a few celebrate them with parties. There are five chances in seven that it falls on a school day. These red-letter days should be made pleasant and memorable when it is not inconsistent with school duties. The bad result coming from these little parties, (and in a degree the same is true of the parties and socials of older people) is that a day or two before are filled with the excitement of anticipation; and that a day or two after are required for the children to regain their accustomed vitality.

We find nothing more hurtful to success in grammar and high school study than the dissipation attending even the moderate use of tobacco. It is too much to ask the great army of Michigan teachers to judiciously antagonize

this habit so hurtful to pupils. We believe twenty per cent. of the boys in grammar and high schools daily use tobacco. Kind and conscientious teachers can lower it to five per cent. The twin of this habit is that of loitering on the streets evenings. Nine of every ten boys that waste time on the street evenings are the poorest scholars. The studies in the schools are generally adapted to the ability of the good or average student. In most cases those who are interfered with by social habits are not even the average students. The conclusion is evident. Those that can the less afford to suffer these interruptions meet most of them.

Ever since higher education for young people became common, but more especially within the past few years, every town and city has developed critics who have made it their constant duty to complain of the excessive requirements of the schools. Not alone has his criticism been applied to the grades in which the tender age of the pupils has made some of it seem just, but it has been urged against high schools and colleges, in which the students have arrived at some degree of mental and physical maturity. Not infrequently have conscientious teachers, superintendents and school committees asked if these criticisms have any real foundation. All of us know what intelligent investigation has shown in most cases. Has the curriculum been considered too heavy? No! Various other causes, however, have been discovered. The courses have been laid down for the good or average student. It is expected that he shall devote to this course of study nearly the whole of his time, not taken for proper recreation and sleep.

Now, what are some of the real causes that have led people to complain? The first may be illustrated by citing you to a young man of frail constitution and bright mind. He worries under close application and finally goes east with his parents. On returning he finds his class advanced, but, determined not to drop back, he summons his weakened forces to do more than the regular course would have demanded. Health gives away; the schools are censured. Another pupil has rushed through the grades much more rapidly than others. We see him solving the very abstract problems in algebra and the intricate practical problems of physics at an age that renders the work too deep for him. He staggers under the load, the schools are censured. Then there comes the army of girls, who, after the studies of school are finished, are expected to devote from one to three hours to the piano, and that other perhaps smaller army of boys, who have to peddle papers and work in stores. These either find the work too hard and break down under it, or resort to the less honorable practice of slighting lessons, which brings them untold trouble in the near future.

The cause of the indifferent success of the above is quite different from that which causes the bad record of those who consider school as an incidental employment, while the lightest fiction together with card and dancing parties seem to them to be the chief aim in life. I have no intention, in this paper, of entering into a discussion of the morality of such disposal of time. I intend simply to touch the subject as it pertains to school questions. In some instances we notice these pupils inclined to an excessive use of slang. In many of their most serious expressions it becomes difficult to choose English appropriate to the subject in hand. They must resort to circumlocution and ellipsis. How often are they compelled to leave subtle thoughts unexpressed for lack of the appropriate vehicle of language. How often we see them silent when some topic of the day is under discussion.

Such pupils may know how to pose in the latest Bohemian steps, but they usually know little of celebrated authors. Do they come to realize what real life is? The school curriculum and the precepts of their instructors being considered by them incidental rather than otherwise, the schools are not able to counteract their erroneous impressions.

It is comparatively easy to complain. Now let us see what we have a right to expect of pupils. Assuming that the schools have a morning session of three hours and an afternoon session of two and one-half hours, making an aggregate of five and one-half hours daily, the pupils of the primary schools (first four grades) should not, ordinarily, be asked to do any school work at home. The pupils of the grammar schools (second four grades) should be able to devote one hour to study at home. There would not be so much necessity for this extra study if these pupils were not reciting more than one-half of the time—their recitations usually number six. In the high school the recitation hours are longer and the number is usually four. The time left for study is not sufficient for the preparation of more than two lessons, hence students require fully two hours for solid study outside of school. I do not think these demands are excessive. We have many an earnest student devoting double this time to preparatory work out of school. However, four hours cannot be recommended and in many cases should be condemned. A large class of fair students find two hours more than necessary to prepare ordinary work.

It has been said that a perfect day is distributed in three parts, eight hours for work, eight for recreation, and eight for sleep. This paper urges but seven and one-half hours for mental application and, doubtless, one hour of this will be taken up by recesses and various other relief exercises. If our students could be led to apply themselves with a greater degree of concentration, the hours here suggested would be sufficient for any reasonable school task.

We have said the school should be similar to the model home. Where can you find better society for those of this age than in the school itself? Can it not and does it not furnish nearly ideal social relations, covering the time the school is in session? Granted, there is not much room for levity and frivolity, jokes and puns, no room whatever for slang and small talk, giggling and simpering; yet there is a world of liberty as touching those elements that enter into the most intellectual intercourse. Note the vast opportunity for the exercise of kindness, charity, forgiveness, affability, respect and dignity. What is society except it be that which passes among persons mingled together? In conversational recitations like those in history, the burden of conversation is upon the pupil, while the teacher simply directs and perhaps in turn leads the argument. In rhetoric, grammar and literature, and even in science it is quite the same.

In this connection it is proper to ask what and how many other social events the school or its classes shall furnish. Class socials and suppers and other purely social evenings should be few, and even these should be arranged to come at such times as should create the least gravitation from regular work. Junior exhibitions and graduating exercises are probably worth all they cost because they arouse the community to an unusual interest in educational matters at home. But there is one phase of these events that demands some modification. They have become so expensive that some pupils are either compelled to leave the school or suffer intense humiliation.

Allow me to suggest, in conclusion, that there is a class of literary-social gatherings that are highly productive of good to the participants. I refer to debating and literary clubs for young men and reading circles for young ladies. These can be easily conducted by the teachers or other competent persons. While the greatest liberty could be given to conversation, still a proper sense of restriction would be present. No more profitable evening can be found than that spent in this manner.

In giving expression to the thoughts in this paper, I hope the days of my own youth have not been forgotten. It would be foreign to my nature to curtail anyone's enjoyment, but I think it our duty as true teachers to advise our scholars and, by dropping a word here and there among the parents, to create a correct sentiment on this subject.

DISCUSSION.

MISS MARY E. FISH said : It would seem that after a sixteen weeks' struggle with the pupil in school, none but fanatical reformers or insatiate monsters would attack the pupil in society. Whether the teacher of the nineteenth century is a reformer or a monster is but a matter of opinion, and changes not the truth that he is very much in earnest. The abandon with which he does not take a vacation suggests that he would make a proper subject for the old lady's prayers, the burden of whose petition was that it might rain nights and Sundays so that hired men could rest.

But let us give to the "pupil in society" a local habitation and a name, for it is not an easy matter to work up a righteous indignation against glittering generalities and cold abstractions. The name "pupil" shall apply to all who attend the public schools, from the lisping kindergarten kind to the belated youth who takes his certificate of graduation at the age of 25 ; and "society" shall mean that intangible entity, or that tangible nonentity which nobody can define ; that beflowered, beribboned, bejeweled, bedizened, belighted, benighted incarnation of roseate nothingness, whose worshippers are in slavery bound, about which the fool doth glibly prate, and within whose precincts the dude doth dotingly dawdle and wisdom verily doth not seek her own.

The pupil is in society. He is there in the plural number. When children, our fathers and mothers were taught that they were to be seen and not heard, and now, older grown, they have bettered their instruction and are neither heard nor seen, if perchance by such self-extinction their "John" or their "Jennie" may shine, for John and Jennie must be both seen and heard.

Today seems bent on making amends to the outraged childhood of yesterday ; but if there are abuses behind there is danger ahead.

It is no wonder that young America is on familiar terms with "the governor" or the "old man," when from his cradle he has been responsible for the entertainment of guests, and the mainspring of success in all home talent performances. Everybody acts as though he were the center of the universe. He probably is—a perfectly logical conclusion for the child to come to. Go to any ordinary exhibition or Sunday school concert, and see what you see. Behold the poor little innocent *débutante*—not exactly "butchered to make a Roman holiday"—but dazed and badly scared, that the gaping crowd may know that some fond mamma has "such a perfectly lovely child." Two years later the same child appears, less lovely in the eyes of others, more so in her own, and pitifully self-conscious ; and so from the time she is made to impersonate Cupid in a tableau, to the proud fourth of July, when, with a dry goods box for a throne and a dray for a presence chamber, she queens it over the sister states as the Goddess of

Liberty, are her vanity and conceit nurtured. Meanwhile the boy's honesty and courage, that very heart and core of manly manhood, under the same abnormal treatment, develop into disgusting self-assertion and bluster.

And even this is not the worst that society does for the pupil. It utterly unfits him for his work in school. Hard study is distasteful, nay, it is impossible, with the sleepy eyes and drowsy head that follow an evening out. The little study he does is in the vain hope of acquiring a superficial veneering that shall cover the depths of his own shallowness; but even the ebullient spirit of youth cannot long hope against such fearful odds, and before many weeks are numbered we hear that "school work does not agree with Johnny, and he's going into a grocery store"; or "poor little Jenny so-and-so has worried herself sick over those beastly examinations." And so somebody else crawls from under his burden of responsibility, and lets it down on the already overburdened public school. There is just one chance in a thousand that the child may have studied too hard; there's 999 chances that he's danced too much, and the public school must pay the fiddler.

Now, is there anything like an adequate return for this outlay? Society does not need the pupil; to the pleasure seekers he is a nuisance, and the workers need nothing but skilled workmen.

Men display more sense in the training of horses than in the education of children. They do not expect a colt to do the work of an old horse; the driver does not exert his utmost skill in training the horse one day, and on the next turn him loose in the fields, because forsooth the horse enjoys the cool, sweet-scented clover better than bit and rein.

The father helps to build schoolhouses, puts his money into libraries, apparatus and exorbitant (?) salaries for teachers, that his children may be educated, and then he and the other fathers in the neighborhood seemingly do their best to defeat their own ends, by such machinations as would make his worst enemy blush. There is no education, but there are parties, and rides and societies and clubs galore. But they say the young people must learn society manners and the ways of the world! As to manners, if they will compare any young girl of eighteen who has been kept at home by a wise mother, a girl, who when little was kind to her kitty and her canary, and now believes that the girl in the kitchen has a soul, a girl who respects the aged and recognizes some superiors, a girl whose greatest happiness is found in the happiness of others—compare this girl with another of the same age who has been literally banged about society for four years past, is *blasé* at eighteen, and the question of good manners will be answered. And if the openings of heaven are upon earth they are in the homes and not in the "ways of the world."

"When I was a child, I spake as a child; I understood as a child; I thought as a child; but when I became a man I put away childish things." Alas for the one who has no childish things to put away when he becomes a man—if indeed one can come to broad, generous, full-grown manhood, not having passed through a natural, playful, rollicking, romping childhood. "When I was a child, I thought as a child." Happy child, if no grown-up wisdom has ever saddled itself upon you! Unhappy wight, who, when starving for the "milk for babes," has been absolutely strangled with "meat for strong men." It is a wicked shame to take from the boy his natural inheritance of blue sky, fresh air, rustling forests, birds, bees, rivers, lakes and flowers, and give him instead, hot, stifling rooms, the very air laden with deception, headaches, heartaches, and wearing excitements.

PRES. L. R. FISKE said: My judgment is in full accord with the positions taken by Superintendant Clizbe and Miss Fish in the paper presented. Were I a pastor in a church, as I have been, I might be glad to have my neighbors' children take prominent part in anything like a Sabbath school concert, but I would surely put a check on my own children. It may be that the interests of a church are promoted by these public exhibitions, but there is danger which I see no means of counteracting that the children which are brought into special prominence, for the entertainment of the audience, will suffer harm that may even continue through life.

There is every reason for discouraging outside social relations and indulgences on the part of pupils in the schools. Scholarship will suffer to the extent that social dissipation is indulged in. The two are wholly incompatible. I apprehend that the difficulty in regulating this subject in connection with the public schools grows out of the unwise course pursued by many parents. Social life is, we admit, a necessity, but enough of it is sure to be supplied, especially for the younger pupils, as incidental to the school itself. And beyond this it is better in the high school and college that special social gatherings be under the guidance, so that they may be under the restraints of school authorities. There is no danger of too much repression. Any school of any grade that runs to entertainments will send forth poor scholars.

PROF. BARR said: We shall not effect the end desired by technical education, but in teaching in our ordinary branches a love of our institutions, by instilling a love of courtesy, of right duty to society. Present in the concrete to young and old pupils, that a life of virtue, sobriety, industry, is the only life that leads to success. Teach by lives of noble men, biography of our great and good men.

MORAL TRAINING IN OUR PUBLIC SCHOOLS.

BY PRES. CHAS. SCOTT, HOPE COLLEGE.

The subject assigned to me on this occasion is of vital interest to the American people. The discussion of it, therefore, must be direct and plain in statement, and not much given to the ornamentations of speech.

"Moral training in our public schools" is the topic to be thus considered. As you may notice, the reference is not to private or parochial schools; not to the family nor to the church, nor to the societies which run their ethic threads of gold through the social fabric of mankind, but to those numerous institutions of our land where the young are gathered day after day and year after year in order to receive the "education," as it is termed, which is provided by the State. We call them "our public schools," and we regard them with conscious and proper pride. If our country has a pillar of striking form and beauty, it is her noble system of popular education; and how necessary it is that from base to capital it should be a shaft of faultless symmetry and power.

The field of observation, however, must be confined to our own fair commonwealth of Michigan. Within its borders are over 7,000 school districts, and, during the last year, over 15,000 teachers have toiled therein for the public weal. It is said that nearly 450,000 pupils have been receiving instruction with more or less regularity. A few years hence and that youthful host will have become the citizens of the State, yea, the very State itself; and will help to make its history and character. What a responsibility rests upon the teachers of Michigan!

Of the intellectual aspect of our school system, there can be no question. The children may compare their present advantages with those of their fathers and say that the old lumbering stage coach, in education also, has given place to the railroad train. Teachers are seeking higher grades and are doing better work; while the pupils feel that they are scaling the heights of learning apace, and that they seldom need the diplomas of college halls. Yes, the cause of education with us is on the advance; the will of the people, the efforts of the legislatures and the coöperation of school officers are crowning it with much intellectual success.

But I must now turn to the moral side of the subject, to the gold within rather than to the apparent gilt without. It may be asked, "Are the 450,000 pupils of Michigan receiving a healthy and true development of manhood and womanhood; of mind and soul, or of head and heart, as we some-

times say? Does moral training stand by the side of its sister, culture? Is this the spirit of our laws, the feeling of our people, and the voice of our civilization?" Some look upon our public schools with anxious doubtings. Notwithstanding the noble number of conscientious Christian teachers, and their warm desires to elevate our youth in virtue, there are statutes, and customs, and opinions and tendencies which have awakened serious alarm. When Professor Church asked for the suggestion of topics to present at this meeting, it was found that a manifest anxiety existed as to the ethical aspect of our system of education. Let it be noted, that the inquiry is about moral training, and not about the presence of moral persons or influences. The former is one thing and the latter another. For example, a fine voice or ear in music, or an ability on the part of the teacher, to render the sweetest harmonies, would never make the young proficient in song. By no means: only a daily drill of the most careful sort would summon forth this power of the soul, and so the training of which we speak must be the fruit of labor and skill ever active in the development of the moral nature.

This solid earth is but the result of physical forces. The moving waters, whether by river or tide or ocean current, have heaped up the strata of its crust, and the billows of fire within have formed the mountain ranges. Learn from this the sure effects of cause, in the moral as well as in the material world. Around us is the civilization of modern Europe, and happy are we in the midst of its environments. But is not that civilization the workmanship of forces, grand soul forces, during the historical ages of Europe? Ask me for the most potent factor in the result, and at once I would point to the church of God and its moral surroundings. The fairest mountain tops of humanity in the world have been made bright by the glorious gospel of Jesus Christ. There may be another civilization in the future, and it will be one of unique aspect on this western continent. If allowed to prophesy, we would say that the status of that civilization, be it what it may, will warmly flow from our modern system of public education. There promises to be an era of wide spread knowledge and superior science, but will God and truth remain as the pillars of the state? Will men love the light, or walk in moral darkness? Will the republic fall because society has lost its vitality? All must know that unless the people be trained to a higher action than the sensual and material, the glory of America may become its shame.

What is the avowed object of our public schools, and upon what theory have they been established and supported with such generous munificence? For their maintenance, over \$5,000,000 per annum are expended in Michigan, and the amount rapidly increases. As a basis or warrant for their cost must be a firm belief in their utility, and the explanation for this is obvious. In nations where all have a citizenship to cherish and public duties to perform, it is assumed that the commonwealth, for the good of all, must fit its citizens for their respective positions in life and for its service. Grant the argument: Let the State prepare her youth for humanity's calls; let her imprint, on every child a stamp, as distinct as upon current coin of the mint; let her furnish men and women who can work with skill in the various activities of the world, and to the common advantage. If this be done aright, then will popular education be indeed an untold blessing.

But mark the correlate. To be fitted for anything in this life, that is worthy of esteem, implies far more than a mere intellectual culture. What

is a massive brain in a withered body, or what an overpowering mind, if soul-feeling be lacking, or what a vast reach of knowledge apart from virtuous desires? The intellect and the affections and the will are as one, and shall education ever seek to sunder the relation? Can the true teacher ever ignore the sway of emotion or the claims of duty; leave the soul to passion's control, or to the mastery of an untrained will? To illustrate: can the brightest school boy be ready for his manhood, when in his home or companionships he is vicious and vile? Or what would be the benefit of a science like chemistry, when the conscience is dead, and the expert therein uses his skill as the means of crime? Shall the pupil be versed in the elegancies of language in order to produce the debasing fiction or poetry which is cursing the land? My meaning is clear: crime often increases by the side of the school, and although moral culture cannot prevent, it will reduce towards minimum the wickedness which undermines the State. Said Josiah Adams, "Virtue is the main pillar of the nation." "It leads, says Paul, to whatsoever things are true, whatsoever things are honest, whatsoever things are just, whatsoever things are pure, whatsoever things are lovely, and whatsoever things are of good report." On the other hand, a neglect of moral training may lead to "perilous times," when some shall be "heady and high-minded, despisers of those that are good."

In the old academies and colleges of the east, there was no absence of ethical care, and the study of the moralities stood proudly by the side of the other philosophies. Even in such state universities as formerly existed no curriculum could exclude moral science, or admit a professor of irreligious principles. Reference may be made to the University of Virginia, or to Girard College, but forget not that the character and standing of these fine foundations were never established until they felt compelled, as it were, to unfurl the banner of our common christianity.

And if this be so, how is it possible for our public schools to build upon any other foundation? If the more mature minds of college students had an anchor like this, how much more the young boy or girl who hardly knows the coming of the danger? Why so many senseless flings at the idea of moral teachings, and the disposition of branding them as sectarian and wrong? The teacher is in duty bound to watch over the character of his pupil, as over his daily lessons. My own early knowledge of duty and obligation came mainly from my preceptors in common schools, and why should it not be so? From fifty to sixty years ago, in New York, the province of the teacher was most distinctly moral and religious.

So far, there may be no essential disagreements among us, but when we enter into some details and essay to answer certain questions, we may differ more widely and honestly, and come to separate conclusions. Still, I shall venture to reply candidly in four or five particulars.

1. What are the relations of moral training to the christian religion as it appertains to our country?

It is assumed that conscience is a part of the human soul; that a sense of right and wrong is universal, but not in degree, and that it may be developed or improved by culture. But how? The wise instructors of the race have never doubted of the means, and to that end have ever inculcated the precepts of religion. Said one: "Piety leads to the palace of virtue." "He who reveres the gods will be good to men." The great reformers were those who led to a better and higher faith.

This being so, the teachings of Jesus have become the mirror of virtue in our land; have created the accepted moralities of the human race. Nine-tenths of the American people believe in the gospel, and contend that an education of any value and power must include the precepts of Horeb and the sermon on the mount. Whatever their party names, they practically are as one in their views of conduct and duty, in the light of the christian revelation.

Again, the highest officers of the State are sworn on the word of God; the Congress of the nation opens with the voice of prayer; the codes of law are molded after the divine commands, and the genius of the people is modified by sacred authors. When can our schools be pointed to any other source of ethics? Is not the New Testament to be the moral medulla of their teaching? What matters it if this be called sectarian, for he who cavils is as deficient in logic as in common sense. Or what if Jews and Hindoos and Mormons object? We do not let them nullify the Christian Sabbath or the laws of marriage, and why should they not in general be subject to the moralities which the country recognizes as of divine authority?

2. To what extent shall moral training be carried?

"Remember thy Creator in the days of thy youth." So said the wise preacher, and so say all who have wisdom. No pupil in the schools should be allowed to blaspheme the holy name of God. From this simple fount of ethics flow the virtues which bind man to man in duty and in love. Education cannot fulfill its office until the human heart has been incited to the full recognition of the brotherhood of man and its claims. The law now says that instruction must be given on the nature and effects of narcotics and poisons, but the true teacher will rise to the gospel position, and brand the drunkard and drunkard maker as enemies of God and man. Similar vices of all kinds call for unsparing denunciation.

3. What place shall be given to the sacred scriptures?

I am no extremist in the matter of the Bible in schools; would not insist upon its use under all circumstances whatever. "Mercy is better than sacrifice," and needless offenses are not to be given. Yet this is clear, that in such a land as ours, and among such a people, the Bible should be used in most of the districts, and that in all our public schools it should be a textbook of the highest moral authority. Legally exclude it in this sense, never! Suffer it to be divided or blasphemed, never! It does not follow, however, that I would make it obligatory against consciences, or against religious or denominational prejudices; only let it be an established "classic" and a recognized corner-stone in any system of good education.

4. What shall be the character of the teachers employed?

One class of qualifications, viz., the mental, is carefully investigated. Note the examinations made and the certificates given. And the cry is for higher standards and stricter questionings. Be it so, but may it not be deemed strange, that moral qualifications are not likewise to be ascertained by law, and that it is comparatively easy for immoral applicants to obtain the guidance of the young. True, the unworthy teacher is rarely commissioned and employed, but where is the effective barrier? What is the legal security?

Anyone whose life or habits or influences are distinctly against Christian morality should be debarred from a certificate, as truly as an ignoramus; the former may be the most harmful in his position. This does not exclude, in

my judgment, the Jew or even the upright Pagan, for their ethical law may be on the Bible plan, but assuredly, it would cut off the unfit and vile with greater certainty, and serve to elevate the moral standard of our schools.

I wished to discuss also the extent of the teacher's authority, especially outside of the school premises, but having consumed all the time which I am willing to employ, I will close with two needful remarks.

First, the crimes of the American people are said to be on a steady increase, and that not merely among the immigrants from abroad, but as decidedly among the native born. Figures show this:

Secondly, the more highly educated are charged with a surprising proportion of all this depravity. Statistics and the newspapers have made statements which almost seem to impeach the results of our school system.

Such facts seem to add a peculiar significance to the subject which has been discussed. Alas, if the fault lies at the door of our public schools! Let us ponder the matter carefully, and face our duty whenever or however presented.

DISCUSSION.

PRES. L. R. FISKE said: In the very nature and conduct of a school that is well organized there is moral training. In a state there are rulers and subjects. There is law that reaches and embraces every citizen. There are duties and there are rights on the part of both rulers and subjects. Over against the rights of one are the duties of another. In the enforcement of these rights, and the regular discharge of the duties involved, there is moral training. Morals mean obedience to law, civil law, or law relating to other relations. That life is moral to the extent that there is willing obedience to law. In the successful management of the school there is necessarily secured considerable measure of moral training. But beyond all of this, it is certainly the province and duty of the teacher to labor to secure the uprightness of life of the pupil. He may not be indifferent to the character of any of his pupils. They are put under his instruction and guidance that they may prepare for the responsibilities and work of later years. Is that boy disposed to engage in vicious practices? Has the teacher a right to pass it by, putting forth no effort to turn his feet into paths of virtue? We take it for granted that the teacher is moral, that he is addicted to no vicious or objectionable practices (of course no teacher in Michigan uses tobacco). Starting with his own personal moral capital, realizing the sacredness of his charge, and that he is to watch over the life of each pupil not less morally than intellectually, the moral training of all the members of his school will be a result secured from day to day. It does not come within the scope of my discussion to speak of the dependence of the moral on the religious. Of course I believe in it, but leave the thought for others to develop. Certainly with God overhead and truth underneath, and moral purposes and a feeling of moral responsibility at the very center of our life, we may and should, as teachers, so carry forward our work that it will result in the moral training of the young who are placed under our instruction for the development of genuine manhood and womanhood.

SUPT. J. G. PLOWMAN said: The great city was crowded. Vast, excited throngs were gathered about all the news depots and bulletin boards. The first dispatches favored the Democrats. The Republicans were patiently silent. About eight o'clock, a change came over the wires. The Democrats reluctantly, but good naturedly took the background. Two hours later, and the cannon had regained its voice; the streets, windows, doorways, alleys, and housetops became a ruffled sea of living, excited,

shouting, exulting humanity; while the earth trembled with the tramp of victory. But among all this tumult, there is no riot nor bloodshed. If you ask why, there is but one answer: The people are morally intelligent. At the same time, in one of the great European cities, the people, excited by a matter of very little moment, compared with the great American issue, are engaged in revolts, and are demanding revolution. Why? Because they are not morally intelligent. A race-war feeling outcrops very frequently in the South. None except the uninformed will ignore this fact. There are sections in the Southern States where the whites frankly admit that they take care of the ballot and they further claim that we, if placed in the same situation, would do the same. The blacks are as cognizant of the nature of the situation as are the whites. As long as there is submission with one and domination with the other, peace is possible. But look ahead. At the present rate of increase, in the year 2000, there will be in eight of the Southern States, 104,000,000 of whites and 196,000,000 of blacks. None but the most obtuse will claim for a moment that, under such circumstances, peace would be possible under the present system of suppressing, or limiting, the ballot. Would we avert bloodshed or race extermination! Then educate and moralize the whole people, not the present generation—for their prejudices are unalterably formed, their destiny is fixed—but the young.

Moral intelligence raises man's point of view above the horizon of clan or color; it makes us see that He created us (white and black) to dwell in peace, subserving the common interests of humanity; and the desire to exterminate is changed into a wish to elevate and humanize.

With the patriot, it is no longer a question whether we ought to teach christian morals, but can we long exist without teaching this science more thoroughly. America's greatest statesman said, "That government which is not founded upon religion cannot long stand." Our modern demagogue says, "Our government is purely secular." Which is the wiser?

We have, in part, followed the secular idea until some of the grand institutions of our fathers are well nigh overthrown, until race-extermination is currently talked in a large section of our country, until the word of God no longer has any place in many of our schools, until some of our teachers are as godless as were the profane heroes whom they admire, and by whose bloody lives they judge modern greatness. Godless schools will soon make a godless nation. History tells us the fate of godless nations: so does the Bible. We are told that there is no objection to the teaching of morals, but that the christian God must not be mentioned, because the government and schools are purely secular.

What are morals in this country? They are the science of the christian religion, with the idea of worship and God omitted. That is we can teach a part of the science, but we must not mention its author. There are no objections to teaching profane history, to our filling the minds of our pupils full of the images and deeds of the war-butchers of the past; but we must say nothing of that character whose mission is to cleanse the hearts and purify the minds of men. All is pacific if we teach about Latin and Latin heroes, Greek and Greek heroes or even Greek philosophers, in fact, anything that is dead or fossil.

But here is a principle, a living, progressive, self-energizing science. It touches the islands of the sea, and they are changed from cannibalism to civilization; it enters the heart of man, and murder, dishonesty, drunkenness, falsehood, licentiousness, hatred, profanity, and avarice flee away; it heightens, widens, and deepens his conception of

life ; it permeates the nation, colleges, universities, and charitable institutions spring up as if by magic : it goes into the devastated, war-stricken south, where the government by force of arms, has liberated in freedom's ignorance, 5,000,000 slaves, and by establishing schools of every grade (schools with a God in them), it scatters the leaven that is to make men charitable and intelligent, and so prevent race-war and bloodshed. Its present, if understood, foretells, with unerring certainty, the future, not only of this nation, but of the world. Still this most vital principle must not enter the minds of our children through the agency of the school.

And yet charitable (?) infidelity and bigotry demand silence, on this great science, in the public school-room. Shall we teach the law of the "rolling spheres" and not mention the law-maker ! Shall we teach about the creation of the earth and say nothing of its Creator ! Shall we teach history, which gleams with the achievements or christianity, and not say anything of Christ ! In teaching literature, shall we ignore the gems of christian thought which burnish its modern pages ! Shall the teacher be dumb before the spirit of history, literature, invention, and even government itself, teaching simply their shadow, not their substance, that principle whose combat with ignorance, superstition, and darkness, makes history, creates literature, and awakens science ! Is it not time for men to be honest on this question, to recognize the hypocrisy of infidelity, to demand of the old cynic his good works, what governments he had founded, his great charities, the good hopes with which he has inspired humanity, and what great, good things he has done for the world at large.

If he has no answer, then accept that principle which is blessing the world, be loyal to it, teach it in all of its cosmopolitan forms.

SUPT. GEO. BARNES said: I have never heard anyone object to the teaching of morals in our public schools. We are crossing a bridge before we come to it. If we teach the subject in its place and in its time, it will meet no objection. We should teach it as an art, not as a science.

SUPT. W. S. PERRY said: I don't think it necessary to teach religion from the Bible. Is there a faculty called conscience ? I believe there is and that the training of this conscience will accomplish our end. Do not think that we need to refer to the Bible or religion to do it. Make conscience quick and strong. Children have no more of conscience than they have of geometry. Potentially they have a conscience, practically they have not. We don't know what method to pursue to make this conscience grow, and that is why we fail. We should call our pupils to exercise their opinions on the virtues and the vices. Conscience grows by use. Boys and girls are neither all good nor all bad, but they are all possibilities. Call into activity the good natures and seek not to antagonize the baser natures.

PRES. L. R. FISKE said : In every State there are sovereign powers. Some one is at the head of the school. He has rights and duties ; his pupils have both rights and duties. Every good school is a system of moral training from beginning to end. All teachers are giving moral training in our schools. I cannot conceive of a school in which this is not the case. No one should be at the head of a school who is not a moral man or woman. Of course no teacher uses tobacco. Teachers can thus buttress the moral training of the boy. Teachers must fee special responsibilities for the character of pupils.

THE NATURAL METHOD IN TEACHING LANGUAGE.

BY PROF. LEWIS STUART, ALMA COLLEGE.

I think it is La Garde who says that the results from the study of the ancient classics in continental Europe are "contempt for the past, incapacity for the future and weak eyes." This is epigrammatic, but then it is not altogether true. What wit would sacrifice a fine epigram to truth? Sidney Smith, in England, said some fifty years ago, and the thought, if not the words, has been dinned into the minds of the English people ever since by quite a large body of educational reformers: "If there is anything which fills reflecting men with melancholy and regret, it is the waste of mortal time, parental money and puerile happiness in the present method of pursuing Latin and Greek." In our own country Mr. Adams voiced the thought of many in his "Greek as a Fetish," and the great majority of those who thought with him and think thus, regard Latin in much the same light.

The reason for such views is suggested in a remark of Dr. Munger, that he really thought during his boyhood's wrestle with Homer that the Iliad was written to bear out the assertions of the Greek grammar. Most of us have had this feeling about Cæsar and the Latin grammar; and not a few, I doubt not, have entertained a similar idea about Milton's Paradise Lost or Wordsworth's Excursion and the English grammar. We have emphasized grammatical rules and principles too much, and the facts of language and the thought too little—the abstract rather than the concrete has been our chief concern. Not that grammar should be disregarded or its importance in acquiring an adequate knowledge of a language depreciated, but the natural or inductive method would have the students study facts first, principles from the facts and the text-book of science for verification. It hopes thus to advance the interest in and the value of the grammar and dictionary as the text-books of the science of language. This is the modern method in science, as you know, and the rapid and gigantic strides forward made of late years by pursuing this method are the wonder of the age. So, too, have the modern languages progressed. In these, as in science, the inductive method is no longer an experiment. Even Hebrew and the Semitic languages which a dozen years ago were the "deadest of dead languages" (if I may be allowed the expression), have been recalled to life and are being studied with wonderful interest and spirit. There are a hundred enthusiastic students of these languages for the former dull, listless, lifeless one.

According to this method a sentence or part of a sentence is placed before the student. The pronunciation and exact translation are given him. His mastery of these is tested in various ways. Let us illustrate this from Latin. The method is practically the same for all languages. The student has before him (on a blackboard if possible) "*Gallia est omnis divisa in partes tres*," divided into syllables and the quantities marked. The teacher points to *Gallia* and pronounces it slowly and distinctly two or three times. The class repeat *Gallia*. The teacher gives the translation *Gaul* and points it out on the map. The class repeat *Gallia*, *Gaul*, and each writes in his note book *Gaul*. Each word is treated similarly. The sentence is pronounced as a whole and the English given word for word. This work is done first by the class in concert, then individually. The absolute mastery of this work is now tested. The words and phrases are taken in any order, the student giving English for Latin and Latin for English either orally or in writing, or both.

We are now ready for the second step. This is the bringing out of a good English translation. This may be done either in English or in Latin, though the latter is preferable. If this latter is chosen, the word "*nonne*" is written on the board and the teacher explains its use, as asking a question when an affirmative answer is expected. The question, "*Nonne Gallia est divisa?*" is given, and its answer "*Gallia est divisa.*" The student gets the idea in a moment, and similar questions will be answered with great promptness and vivacity.

The student almost unconsciously grasps the relations of the parts of the sentence, and, at the end of this exercise, it will be translated at once into good English. Great care, of course, is required to get the student to think the Latin both in question and answer, but the results will more than repay the enthusiastic teacher for the time and care required. The advantages from developing the thought in this way are many. The words and phrases and the facts of etymology and syntax involved in them are gone over again and again. The ear and the tongue are exercised; attention and readiness are developed. Professor D'Ooge, in the preface to his "*Colloquia Latina*," very aptly says in this connection: "It will be granted that speaking Latin is sure to promote thoroughness. It is sure to bring exactness of pronunciation and accent, to give a large and ready vocabulary, to perfect the knowledge of forms and to make the fundamental constructions as familiar as constant use can make them." This is from a teacher whom you all know, and his experience is that of many, indeed of all who have tried it, so far as I have been able to learn. The questions are varied slightly from time to time, and when the first chapter is fairly well mastered, the student can give its contents in answer to less than a dozen questions. If this work is omitted a few simple questions showing the relations of the parts of the sentence are asked, and the thought thus made apparent will readily be clothed in proper English dress. The sentence is now analyzed into subject with modifiers, and predicate with modifiers. This is the work of a very few moments, if the student has any knowledge (I might say even though he has no knowledge), of English grammar. In this first lesson, attention would be called at this point to the vowels *ā, ē, ī, ō, ū*, from the sentence on the board, and English words are given by the class in which the same letters represent the same sounds. The teacher selects one and the student jots down in his grammar or note book

ā=fat, etc. The consonants are treated in the same manner. In these it is only necessary to note the letters which differ from the ordinary English sounds, *e. g.* the letters *v* and *s*. The words *omnis* and *partes* illustrate accent in words of two syllables; *Gallia* and *divisa* in those of three. *Gallia* and *divisa* illustrate also grammatical gender; *Gallia* and *partes* number. To go over this work with a class takes less time than to describe it, and it is also more entertaining. This is laboratory work, and the student is simply directed in his experiments while the results are verified by the teacher, by notes and observations in the "method," and by the grammar. The vocabulary with the words arranged alphabetically is now taken up. The Latin word is given by the teacher; its translation, the Latin phrase in which it occurs and its translation by the student. *e. g.* The teacher gives *divisa*. The answer is *divided*, *Gallia est omnis divisa*, *Gaul is all divided*. This has been found a very interesting and profitable exercise. The dreaded vocabulary, dreaded not more by the pupil than by the teacher, is now a source of genuine pleasure to both. In connection with this exercise simple English derivations are elicited from the class and suggested by the teacher, *e. g.*, *divisa*, *division*, *divisor*, *divide*, etc. The last exercise is a rapid review and test of the thorough mastery of the entire work. This is done by combining the forms and principles into new phrases and sentences, the same words in new combinations: 1. Latin into English. 2. English into Latin. This furnishes also the best possible preparation for composition. It is composition, but with none of the dryness and formality of the regulation prose composition book. This work, like the vocabulary work, is no longer a bugbear but a source of delight.

Before the next recitation the student is expected to practice (1) reading the original text, (2) translations, word for word and into good English, (3) giving the Latin orally and in writing, with the help of his own word for word translation. He is also expected to read over the notes and observations where he finds the facts and principles with which he has become acquainted in the recitation room, and to further verify his work by reading selected portions of the grammar. On the following day the Latin is read, not simply pronounced; from the word for word for word translation the Latin is given orally and in writing; the more important facts and principles are recalled and the class are ready for advance work. All advance work is for some time done in the recitation room and directed by the teacher. The same general method is pursued in all the work, subject to such variations as naturally suggest themselves to the apt teacher. When a word or construction is once met with the student is expected to know it forever. If it is forgotten, the teacher does not explain it, but, if possible, aids the student in recalling it. This is an educational principle of much importance. What the student has thoroughly mastered is rarely forgotten; when it is forgotten, it should be recalled, not treated as new. This is the condition of a continuous progress. Habits of observation and attention are cultivated, the memory is strengthened, and these are things of inestimable value in all the work of life.

By the inductive method the study of etymology, syntax and composition is vitalized. The student is all along, even from the first day, conscious of results, the dreary monotony of grammar and vocabulary and the patchwork of First Lessons and First Readers are all avoided, and the words and thoughts and spirit of a great master are taken up into the life of the student. After the student has read a few chapters of Cæsar or Xenophon in the manner described, he is prepared to read the rest of the writings of these

masters with ease and rapidity and almost entirely without the aid of either grammar or dictionary. He reads Latin and Greek as the student of French reads French, or the student of German that language. The old time drudging is gone. Study is pleasure. No fear that the student thus trained will lose his interest in classical studies even before he leaves college. When a new author is taken up—say Cicero—one or two orations will be thoroughly mastered, and the student will be able to read Cicero's orations as he reads those of Burke or Webster. In poetry the same method is pursued, and in the study of prosody the student learns to read metrically first. After reading some stanzas of *Evangeline* the teacher reads a few verses of Vergil. Soon the rythm is caught and the principles developed. The same principles are everywhere observed; facts first, principles from facts, and the grammar and dictionary for reference.

It is proposed by those who are the leaders in this movement to prepare special vocabularies for the earlier read authors, Cæsar, Cicero, Vergil and Xenophon. When the student has mastered, for example, the Helvetian war, that is thirty chapter of Cæsar, he will be provided with a vocabulary which contains such words and such words only as are found in the remaining chapters of the first book, and have not been met with before. The next one will contain those words which are found in the second book but not in the first, and so on. In the notes and observations the same principle will be observed in respect to syntax. The necessary helps for inductive teaching are in course of preparation by enthusiastic scholars in various parts of the country, under the general direction of Professor Harper. Much of this work has already been done in Hebrew and the Semitic languages. Scholars are engaged in preparing a method for New Testament Greek. The work has been begun in Latin and Greek, and it is not to be doubted that Michigan, which has already done so much for classical study in the past, will have some honorable part in this revival. No scholar, in America at least, can fail to appreciate the service which such men as Professor Boise, formerly of the University of Michigan, the late Professor Elisha Jones, Professor Frieze and others have rendered—a service vastly broader than their respective departments. The noble service of the past is the promise and prophecy of noble service in the future. The passing years bring with them ever increasing demands and an ever more imperative call for progress. We must lighten the burdens of the rising generation, kindle a new enthusiasm, gather up the labors of the self sacrificing heroes of the past and, if possible, attain unto better things. The present demands larger results and better results for the time and energy spent in classical study. The inductive method claims to give these. All that is best in other methods is conserved. Exact and critical scholarship is increased. The greatest enthusiasm is aroused. The student is inspired by the spirit and life as well as by the thought and language of distant lands and by-gone ages. The narrowing commercial tendencies of the present and its increasing materialism are corrected by a broader culture and a larger sympathy. Its claims are certified by success in other fields of knowledge, and in other parts of the language field. Let us cordially welcome the young giant, prove him and if he can only make good his claims here as he has elsewhere we shall soon see classical study in the place it once held, and deserves to hold, in the educational system and in the popular favor.

DISCUSSION.

PROF. B. L. D'OUGE said: As I had no opportunity of conferring with Prof. Stuart, or of reading his paper before coming to this meeting, it had not occurred to me that there were possible two ways of interpreting the above subject; the one, that the term "Natural Method" referred to that process of teaching a foreign language by the oral method without grammar, championed by Dr. Sauveur and his followers; the other, that the "Natural Method" meant the method natural to the man who is teaching it. The latter understanding is the one adopted by the Professor; who, in his own case, makes it mean the "Inductive Method," and who has limited it to the study of Latin only. This, to be sure, is a subject in which I am much interested, and it is one which I am glad to discuss; but as I took the subject in what appears to me to be its more natural and evident sense, and, as I know that many of you have taken it in the same sense, I will take the liberty of saying a word about that first, and then try to show its application to the method so well described in the paper.

That there is something in a name, in spite of what the poet has said on that subject, is well demonstrated by the happy baptism given to the method now under discussion, the so-called natural method. I believe it is largely responsible for much of the vogue that the method has had. The name implies, in the first place, a discovery of what is natural; and, in the second place, assumes that all other methods are unnatural and irrational. Though its educational status has been often discussed and settled, it possesses the well known characteristic of Banquo's ghost and must be laid again and again, that the newer and younger teachers may have an enlightened conscience on the matter, and may not be led astray by the glittering but shallow successes that the method has scored.

There is a popular and therefore wide-spread belief that the ability to speak a language is the surest index of acquaintance with it; while in reality speaking it is merely a knack, or an acquirement, something like piano playing or telegraphy, and is, in itself, quite devoid of any educatory value. For example, German boys coming to this country, soon speak English almost as well as their mother tongue; but they have not therefore broadened their minds or increased their stock of ideas. They simply use two sets of symbols for the same thoughts. To add to the authority of my statements and settle the whole matter quite conclusively, let me quote to you the opinions of some of the ablest teachers in the land.

Prof. Calvin Thomas, of the University, in a paper read before the schoolmasters' club, says: "The value of the ability to speak a foreign language lies along one of two lines, it ought to be either practical or educational. Of the former, the attainable results of teaching students in the class room to speak a foreign language, are so insignificant as to be utterly devoid of any practical value out in the world. The ability to speak a foreign language is a matter of practice, not of mental discipline. The teaching of a modern or ancient language should be thorough and scientific. In the laying of this foundation, a certain amount of colloquial practice is desirable. There are some things about a language that are needful to learn, which can really be learned in this way better and faster than in any other. But it should be treated not as itself the end of study, but as a means to an end, that end being linguistic and literary scholarship."

Prof. Morris, of Williams, in his excellent monograph on the "Study of Latin," says: "This is not intended to imply that the natural method may not be an important help in preparatory work, but only that it is entirely incapable of affording

any drill in scientific thinking. The natural method is absolutely valueless as an educating tool, and the learning of a new language by simple imitation leaves the mind very much where it was before. It duplicates the power of expression, but neither doubles it nor gives a single new idea to be expressed." In the index for May, 1884, Prof. Lodeman, in speaking of the Meisterschaft system, says: "Any method that aims at making grown people learn like children, and claims that reflection, judgment, in short, all rational aids should be avoided as dangerous, is unnatural and unphilosophical."

From the November and December numbers of the Academy for 1886, I quote the following opinions of well known scholars: Dr. K. F. Becker says: "The frequently praised methods of learning foreign languages without grammatical foundation, can, to be sure, lead to a certain fluency of speech but not to a thorough command of the language. For mind development these methods are positively injurious."

Prof. W. T. Hewett, of Cornell, says, "The scientific method of teaching language requires that all the powers should be enlisted in the work. A defect of the so-called 'natural' method is that it appeals to the memory exclusively. The oral method should be assigned to its true place. It is an important and valuable aid in training the ear to understand the spoken language. It is fallacious, however, to hope to impart to all students the ability to speak a foreign language fluently. Few would have occasion to use the language, if acquired. It is a valuable aid in the mastery of grammatical forms. The manifest merit of the natural method should not be obscured by the exclusive claim that it is a substitute for and should displace other recognized and approved systems of instruction. As an accompaniment of higher study, it will perform a useful, and possibly an indispensable part."

Prof. H. C. Brandt, of Hamilton College, says: "When 'Sprechfertigkeit' is aimed at the natural method it is the proper and only one to use, but it will not do when anything else but the speaking of a language is aimed at."

Geo. A. Bacon, says: "The advocates of the natural method have always failed to recognize that the differences in the conditions under which a language is to be learned necessitate changes in methods of instruction. This is seen in their failure to discern the difference in the mental environment between childhood and maturity."

From these opinions we may fairly infer that the natural method has a place, but that its advocates have claimed too much for it. Its mission seems to have been to get us away from our former slavishness to grammar to a more rational procedure; but, like all reforms, it has gone to the opposite extreme. Even Dr. Sauveur, perhaps the leader of the movement, seems to have a glimmer of this fact himself, for he does not go to the length of banishing grammar entirely as some of his disciples have done, but says, "In my thought it is absolutely wrong to begin the study of a language with grammar. It is not natural;" but further, "when the moment has come, teach the pupil grammar completely, deeply, philosophically." Now, if the method has use and place, what is it? Its use may be divided into two general classes.

A. To give a speaking knowledge of the language. If one's aim is to learn simply how to speak, how to become master of a small vocabulary of common words and idioms, let him use the natural method by all means. As Professor Heness, of Yale, well says: "If you would learn to speak, speak. By reading, writing and grammar you wont learn to speak." This, then, is not at all to be recommended for its educational, but only for its practical value, *e. g.* to men who need the language or a smattering of it for their business or for convenience in traveling. The number of such cases

in our schools and colleges is comparatively small. Those that need to speak a foreign language can best acquire it by a short residence in the country whose language is sought, or by living in a family of its natives in this country. The real conditions of learning by the natural method are then realized far better than by the artificial methods transplanted to the school room. We may, I think, leave out of consideration then, the first use of the natural method for two reasons already apparent; first, because it has no educatory value, and secondly because its results are of no practical use to most of those that follow it.

The second use it may have is :

B. To assist in the acquirement of a scientific knowledge of a language. By scientific knowledge I mean that familiarity which can come only from a careful observation of the facts and principles of a language, their thorough mastery and their repeated use. Prof. Stuart has already indicated in his paper how this may be done with the "inductive method." Prof. Harper, of Yale, its foremost advocate, urges this use of the natural method strongly, and says in his "Inductive Greek Method," under "Suggestions to teachers:" "Introduce conversation in Greek upon the text if possible; it relieves the monotony of a recitation; it fixes the text more firmly in mind; it teaches the pupil to think in the language he is studying." I make constant use of this combination of methods in my own classes, both in Latin and in Greek, with the best results. Especially in the earlier stages of the study it is of great advantage. Added to an exact study of grammatical facts, whether by the inductive method or any other, the natural method gives enthusiasm, exactness in pronunciation by cultivation of the ear and vocal organs, increase in vocabulary, and great familiarity with forms and constructions.

As regards the respective merits of the inductive and the deductive methods of studying language, there remains time to say but little. I gladly acknowledge the many claims to consideration that the inductive method presents. But, for one, see danger in separating inductive and deductive too rigidly. We get our knowledge in both ways. The great influence that scientific research has exerted is felt in all lines of work, and its triumph includes much of the domain of philology. But let us not be carried away by the scientific spirit to such an extent as to banish all deductive means of getting knowledge just because they are so. Let us not expect too much of our pupils, let us not demand of a boy of fourteen a power of observation, generalization and proof that might tax many a mature mind. This is the warning note I would sound, while agreeing in the main with the method explained and recommended in the paper. And, finally, let us not forget that the teacher is greater than the method; and that he is to use a method, but let no method use him. It has been well said, that a man's reverence for method usually varies inversely with his intellectual breadth. We want no machine teachers. That is bad enough in politics. Let me conclude with a few appropriate words from Prof. Tomlinson, of Rutgers' college in the Index for 1884: "No careful, competent teacher will bind himself to any one method. He strives to rise above his method, as a man is better than the thought of man. In every recitation there must and will be a constant mingling of all methods. No teacher should confine himself to one method, but be conversant with all and hold to the proven good of each."

KINDERGARTEN METHODS IN OUR PUBLIC SCHOOL; WHAT AND HOW MUCH.

MISS MARY LOCKWOOD, CALUMET.

The first principle of the kindergarten method is self activity. That the child may reach a harmonious development of his whole being, he must grow freely in all directions. No growth or development takes place without activity, use is the law of intellectual and spiritual as well as of physical increase hence all-sided activity is necessary to all-sided development. Growth in one direction should not be allowed to supersede growth in another. The cultivation of the physical and of the moral nature should go hand in hand with the training of the intellect.

Until the fullest development of all the powers and possibilities of the human being is reached, education is not complete.

Froebel was the first educator to bring a wide study of human nature to bear upon child life and to reduce to an orderly system the results of his observations. He studied not only the child, but the history of the human race in its strivings after culture, and found that the race is epitomized in the individual.

The race began in perfect ignorance of itself and its surroundings and reached its present state of mental, moral and spiritual culture through repeated experiments and experiences. In a like manner the child begins with every thing to learn, and he comes to complete possession of his faculties and a knowledge of the world around him through corresponding stages of development. So Froebel arrived at the conclusion that the education of the child should be conducted as "God has conducted the education of the human race."

The education of the race has come through its activities which have been conditioned by material things. Regarding the child as the race in miniature, Froebel provided material by which the child may learn by doing. He substitutes experience for instruction and action for abstract learning.

"The undeveloped mind," he says, "needs sensuous impressions, the visible sign, in order to arrive at an understanding of truth * * * the deepest need of childhood is to make the intellectual its own through symbols."

Froebel regarded all phenomena as the signs of spiritual truth, and considers the study of nature of great importance. Children must first read the

book which God has given humanity to read in its childhood, namely, the world which He created and in which he manifests his divine thoughts. Not till this part of the child's education is brought into a certain stage of forwardness did Froebel consider that the child should be given books. He would have a knowledge of ideas wait upon a knowledge of things. To live with books and be ignorant of nature and of the facts and laws in the midst of which our lives are placed, was to Froebel no less senseless than irreligious. The objects of the material world Froebel regarded as God's gifts to the human race, provided out of his loving kindness for our education. Out of the many objects suited to all stages of man's development, Froebel chose a few which should epitomize the world of matter in its most salient characteristics and arranged them in an order suited to the different stages of the child's development. These objects he called the kindergarten gifts.

Some one has said: "Each of the gifts in its place is the small end of a large problem which the child is continually working out from the center in which he stands, into ever widening circles, from which he may again take into his mind and heart all the truths worth knowing, which go to make up a life worth living."

The gifts are accompanied by appropriate occupations which enable the child to put into permanent form the ideas which he receives, their study.

"Man is a creative being," Froebel repeats again and again. By this he means that out of given material man may make new combinations, for in this sense only can man be said to create. By the use of the occupations, this creative instinct is fostered in the child, and his inner thought and purpose finds outward expression, and by being thus expressed reveals the child's possibilities to himself.

The gifts are divided into three groups, suited to different stages of the child's mental growth. The first group consists of the first and second gifts and is intended to give the child a basis for the classification of his ideas of color, size, form, position and number. The child of five or six years of age has enough material in his mind for it to work upon for a long time, but he has often no means of gaining control of what he knows. His ideas are unclassified and indistinct. Bain says, "To know classification is to be cultivated." We may assist the child in the study of these gifts to take his first steps toward culture.

The first gift is composed of six soft, elastic, worsted balls, comprising the primary and secondary colors. The ball was chosen by Froebel to be the first link in his chain of objects because it is the simplest shape, yet the one from which all others may be derived. It is the form most readily grasped by the mind as well as by the hand. Its elasticity and mobility bring it very near to animate nature, and thus to the child's sympathies. The bright colors are repeated in fruits and flowers; the shape is the "ground form" of nature.

Every child loves to invest his playthings with personality. Richter has beautifully said: "Every bit of wood is a gilded flower rod to the child, on which fancy can bud hundred leaved roses; in the eyes of wonder working fancy, every Aaron's rod blossoms."

Through the many games played with the balls of this gift, the child may be led into a very fairy land of wonders—the world around him.

By the use of the ball the child gains a distinct idea of the spherical form and of its universality in the world of nature. He also gains ideas of color

which form a nucleus around which all other ideas of color may group themselves.

The balls may be made the subject of language and reading lessons. Their mobility and elasticity make them especially valuable in teaching words denoting action. Accompanying this gift we have the occupations of assorting colors, pricking and crayoning pictures of balls, and modeling balls with clay and coloring them when dry.

The second gift consists of a wooden sphere, cube and cylinder. This gift illustrates the law upon which Froebel built his educational system. This law is sometimes called the law of unity, more often the law of the connection of contrasts or opposites.

This law had long been recognized as governing all things in the material and intellectual world, but Froebel was the first to apply it to methods of education.

Every idea which we have is based upon some object, and the clearness of the idea depends upon the extent of our knowledge of all the details of the object. We gain this knowledge through observation and comparison. In order to compare we must recognize differences. The most distinct differences form relative contrasts which are connected by that which has a resemblance to each. Thinking, therefore, is a connection of contrasts or opposites in the mind.

Froebel recognized this truth and realized how important it is that the child be early taught to recognize differences by the comparison of contrasts. Slight differences are not readily recognized, so to the child strong contrasts should be first presented. This is done in the second gift.

The sphere and cube are exactly in contrast as to their form. The sphere has only one surface and no edges or corners. The cube has many faces, edges and corners. The sphere is unchangeable in all positions, while the cube presents different aspects according to its position with reference to the eye. The sphere has always a tendency to motion, the cube to rest. To unite these two opposites the cylinder is given. Its curved surface resembles the sphere, and its two faces and edges the cube. Then, too, when placed on its face it resembles the cube in inertness and when rolled on its side it appears almost as mobile as the sphere. This gift is sometimes called the type of the universe, because the whole universe of form may be classified under its three forms; sphere, cube and cylinder. There are numberless devices by which the child may be led to discover this truth.

A cabinet of form may be made in which a shelf may be devoted to the sphere and all forms related to it, another shelf devoted to the cube and its relatives, a third to the cylinder family. If a fourth shelf be provided where strangers in no way related to one of the three forms may be entertained, the child will soon be led to discover that there are no strangers in the world of form. Now, if the sphere be rapidly revolved in all positions, the child will discover its unchangeableness. If the cylinder be revolved about an axis parallel to its plain faces, a sphere will appear enclosed in an indistinct cylinder. If the cube be revolved about an axis passing through the center of opposite faces, it will appear a cylinder. This device shows the child that each form is an evolution from and a part of the same source; that all form is embodied in the sphere. Thus the child gains a glimpse of the great law of unity underlying all things.

The second group of gifts is composed of the third, fourth, fifth and sixth.

These are variously divided cubes and are usually called the "building gifts." With these gifts the child's instinctive desire to investigate and to know the essence of things is satisfied. The cubes may be taken apart and built up again. With them the child can represent many of the objects he sees around him. Froebel said that the order of his building gifts was such that in their use the child could represent the world's great building epochs from Egypt to Greece. These gifts are very valuable as a means of making the child practically acquainted with the elements of geometry. In the third gift he works with the cube; in the fourth with the parallelopipedon; in the fifth the triangular prism is emphasized and in the sixth the square prism. It will be readily seen that this group of gifts presents a much wider field for language and number exercises. It also offers an excellent basis for mathematical and architectural drawing, which may be carried to the highest grades of the public schools.

The third group comprises the remaining four gifts, the 7th, 8th, 9th and 10th which present planes, lines and points. In the 7th gift almost unlimited opportunity is given for study and practical work in plane geometry. The enclosing of space by lines may be studied in the 8th and 9th. The 10th gift is composed of lentils which represent the point.

The order of the gifts is from solid to surface, from surface to line, from line to point. With the occupations this order is reversed. We begin with the point and end with the solid. The gifts are analytical, the occupations synthetic.

It would be impossible in the limits of this paper to answer definitely how much of the kindergarden methods may be applied to the public school. Those who have thoroughly studied the system believe it to be founded upon nature's laws. If this be true then the spirit of the system should be carried through the entire course of study.

It has long been admitted that when the school withholds all work from the restless hands of childhood it greatly lessens the good which it might accomplish.

"The hand and head being jointed by nature ought not to be separated by education," is one of Froebel's principles. The school as well as the kindergarden recognizes the necessity of giving "things before words," but in the schools this has been applied only to the inleading process in the growth of the intellect. The fact that in the expressive or outleading process, things should also come before words, has been overlooked.

Hailman says: "It has been conceded that in the growth of insight, in the formation of accurate ideas, expression is needed as much as impression, that the intellect owes much to the reflex action which comes from efforts to formulate knowledge in words. But it has been overlooked that the more or less plastic expression of ideas by the hands, with the help of suitable material, holds to their formulation in words very much the same relation that things holds to symbols; that in expression, too, it is necessary to bring things before words."

The young child is endowed with great curiosity and a desire for investigation, which is shown by the constant doing with the hands. These desires give great opportunity to the skillful teacher, for if suitable material be provided for mind and hand, habits of physical and mental activity will be acquired which will influence the whole life.

If these desires are not gratified they are dulled, and a mental apathy takes place from which many are never aroused.

Among the occupations of the kindergarten system which may be carried into the schools we find clay modeling, paper folding from squares, circles, and triangles, paper cutting and pasting, paper cutting, drawing, mat weaving, pricking, crayoning, cardboard modeling and parquetry pasting. No one who has made a careful and unprejudiced study of the kindergarten system sees in the beautiful productions of childish hands, mere fancy work, but he recognizes their value as means of physical, mental and moral culture. One writer says that the command "know thyself" is impossible of fulfillment except through obedience to the injunction "know what thou canst do."

"Who can count the fettered powers and gifts that drop from the tree of life like unripe fruit because they had no scope for exercise, because the soul was never brought out from its darkness."

"Come, let us live with the children."

DISCUSSION.

SUPT. A. S. HALL said: What and how much will depend a great deal on the condition of the school and the public sentiment with reference to the work. If the school is already well graded and doing the work that should be done, more of the kindergarten material can be used than under other conditions. Nevertheless, the public feeling towards the work will be a large factor in the matter. If the work is just being introduced and the public is not specially in favor of the methods, it should be used only in primary grades while the people are being educated. If it is thought desirable to adopt the work in other grades, it should not advance faster than a grade a year.

The first gift may be used very effectively in the first grade reading, especially the beginners' class, furnishing objects, form and colors with which the child is to associate words, sounds and word forms. This gift may also serve as an introduction to numbers. In other grades fractions may be taught by means of the third and fifth gifts. With the third gift $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$, $\frac{3}{4}$, $\frac{5}{8}$, $\frac{7}{8}$, 2-4— $\frac{1}{2}$, 2-8— $\frac{1}{4}$, 4-8— $\frac{2}{4}$ — $\frac{1}{2}$, 6-8— $\frac{3}{4}$, can be made very clear to the child. With the fifth gift $\frac{1}{3}$, 1-9, 1-27 and all the various fractions growing out of these combinations can be presented to the young pupil. By a peculiar combination of the parts of the fifth gift 1-12 and the numerous fractions growing out of combinations of two, three, four, etc., twelfths may all be easily and thoroughly taught. But we must not overlook clay modeling and the results to be obtained from this part of the work, taking hold, as it does, of entirely another side of the pupil's nature. To say nothing of the purely manual training it furnishes, in giving delicacy of touch and deftness, much can be obtained from this in the way of close observation and careful comparison of objects that are to be reproduced in clay. How many of us go through the world half blind because we were not taught to use our eyes in our youth. How many of us could model a pear leaf or a plum leaf or many of the forms that we see very often, yet do not really see. Not that that knowledge would be specially valuable, but the habit that this work would establish would be of almost inestimable worth in leading us to see more in nature around us every day. But this clay modeling has another value for the school. Drawing of flat forms, I mean simply pictures, has no very large educational value. If the pupil is taught to work the clay he can make his own forms and have real objects before him for representation on paper. In this way much expense can be saved the public which would otherwise be necessary if this plan of drawing were followed.

Space would not permit that all the subjects of school work should be mentioned separately. The ingenious teacher, who thoroughly understands the system, will find a thousand and one places where these methods may be used in reading, numbers, language, science, and, in fact, every branch taught in the public schools.

PROF. JOHN GOODISON said: Am personally in sympathy with the work, but think that Froebel's view of psychology, on which he based his system, is very erroneous. The greatest value of the system is in cultivating the idea of form. The process of analysis and synthesis must be united.

As a teacher of drawing for thirty-five years, I at this time wish to enter an emphatic protest against the kindergarten system of teaching drawing. The paper folding by lines, etc., does not give the child a proper idea of representing form.

METHODS OF TEACHING EFFECTS OF ALCOHOL AND NARCOTICS.

MISS MARY LOUGHNANE, LAPEER.

Education, in its highest and truest sense, recognizes the physical, intellectual and moral being of the child, and demands the harmonious unfolding and development of this threefold nature.

Train only the physical attributes of the child and you make an animal of him; direct all your attention to his intellectual faculties and you may produce a prodigy, but you will ruin him for his best usefulness in life; cultivate his moral nature exclusively and too frequently you develop a fanatic.

True education consists in so stimulating and developing the physical, intellectual and moral faculties of the child that he may be fitted to occupy the best position in life that his natural powers, thus trained, will permit; that he may be useful to his fellow men, of value to the community, and as important a factor as possible in making this world better.

Any system of education which fosters the growth of one or two of these powers and permits the others to become dwarfed by inactivity or neglect, "when weighed in the balance will be found wanting."

True education not only stimulates the development of the physical, intellectual and moral faculties of the child, but it also cautions us to beware of the enervating effects of some of the attendant characteristics of abnormal higher civilization. In other words, if we would escape the doom of Assyria, Greece and Rome, we must shun many of the paths and by-ways of luxury and indulgence. True education restrains us and says "nay" when custom or habit too frequently invites us to partake of forbidden fruit. Ah! well may we tremble when we turn our thoughts toward ourselves!

Many of the seeming demands of our modern society are in direct violation of the laws of harmonious unfolding and development of him, who, having been created in the image of his Maker, and who may, if he will, think God's thoughts after Him.

The use of narcotics and intoxicants has been carried on to such an alarming extent, among our English speaking people, that the State has been forced to recognize the monster evil and suggest a remedy for its overthrow and banishment. This use interferes with the perfect development of those three God-given faculties.

There are many diseases of the mind, the body and the moral nature

which physicians well know are caused by alcohol, but which the public generally is not aware are produced by this agent.

It causes a chronic inflammation of the brain and of all the other nerves of the body; it hinders the perfect development of the mental faculties; it precludes the formation of strong, symmetrical character; it stimulates the lower nature at the expense of the spiritual and higher. Evidently then this study should have a very important place in our system of education.

While much is being done in the detailed improvement of our systems, in respect both of matter and manner, this one most pressing necessity has been sadly overlooked. To prepare the young for the stern duties of life is tacitly admitted by all to be the end which parents and schools should have in view. And fortunately the value of the things taught and the correctness of the methods followed in teaching them are now universally judged by their fitness to this end.

The propriety of substituting for an exclusively classical training, a training in which the modern languages should have a share is argued on the ground that it better fits the youth for usefulness in life. The necessity of increasing the amount of science is urged for like reasons. Why should it not be argued on the same principle, that every child in the republic, through the school, should be taught and intelligently warned concerning the effects of alcoholic drinks, tobacco and kindred narcotics. And is it not of vital importance to interest and arouse teachers in order to secure existing laws regarding this study?

It is conceded by the best legislators of some of our States, and indeed by every thoughtful person, that the hope of the nation in respect to the use of alcohol and narcotics is in the education of the young. If this new education—scientific temperance—is to give to the world a generation of total abstainers, as we expect it will, then like the little Holland lad who held his hand over the dangerous opening of the dike, teachers must throw themselves against these dangerous openings which are admitting the waters of destruction, by faithfully complying with the law—becoming scientific temperance workers in their schools.

Thousands of boys grow up with the idea that beer and cider are not very bad drinks. and that tobacco is really quite a good thing. They smoke and chew long before they are out of their teens, and the knowledge of the taste of beer and whisky follows hard on the heels of that of tobacco. And it is not until they experience the poisonous effects upon their own systems that they become convinced of their injurious character.

In accordance with the laws of the State of Michigan it is an encouraging fact that teachers are now required to inform themselves somewhat as to the nature of alcohol and narcotics, and their action on the human system, and so prepare themselves to give sound instruction to their pupils.

What the American people need on this vital theme is instruction. They need to know what the physiological action of alcohol is. They need to know that alcohol is a poison; that it is a narcotic; that it does not build up tissue as a food; that the legitimate result of its use is to weaken important organs, to interfere with their proper physiological functions, to alter tissue, to paralyze the nerves and nerve centers, to destroy the freedom of the will, to obliterate the power of distinguishing between right and wrong, to paralyze the higher nature and to let loose the lower, thus opening the way.

to crime and finally destroying the highest type of animal creation—body and soul.

If the American people can be taught that all this is the natural and necessary result of alcoholic drinks it will go far towards undermining the influence of this terrible evil in our land, for many of our well disposed citizens believe their use as a beverage may be harmless and even beneficial, and it is only their abuse that is to be deplored.

I am firmly convinced that the State expects from its teachers a preparation on their part for the work of giving scientific instruction upon the effects of alcohol and narcotics.

The teacher should be more or less familiar with the manufacture of alcohol, for it is well known to men of science that alcohol does not exist ready formed in nature, but is always the product of art.

The instructor should be able to explain to his pupils that grain is converted into malt by sprouting; that malt is changed into work by solution, and that work is converted into intoxicating drinks by fermentation; that fermented liquors subjected to the process of distillation, give as a product, ardent spirits. He may know the relative percentages of alcohol in fermented and distilled liquors.

The teacher should be acquainted with the properties of alcohol, its inflammable nature, its hardening effect upon animal tissue, its irritating properties, its coagulating effect upon albuminous substances, its antiseptic nature; in short, its murderous antagonism to life and against man, living, while it nourishes, protects, and arrests decay of all dead flesh. And more important still, the instructor should know the action of alcohol and narcotics upon the tissues and organs of the human body.

It is then evident that from the primary grade to the high school, from the lowest class in the district school to the University, the boy must be taught and trained, not told, that tobacco, cider, beer, and whisky are poisons and that used as a beverage they always endanger the drinker in proportion to the amount taken.

The teacher must impart to the pupil what science has proved to be true, whether or not it coincides with his ideas. To do this successfully text-books on this subject must be used.

Oral instruction, with our present imperfect preparation as teachers, would be very inaccurate, since we have had comparatively little drill in methods of teaching this new study, or in the matter to be taught.

In the primary grades, where the pupils are learning to read, the teacher can give, as often as twice a week, an oral lesson on this subject of not less than ten minutes. These lessons should be illustrated truths, adapted to young minds, by using all the modern objective methods of teaching.

The wise teacher will realize that the first and main object of these lessons is to impress upon the young minds the reasons why they should not drink cider, beer, wine or other alcohols, and why they should not use tobacco in any form. It will be necessary to teach with this some of the simple laws of health and a little relative physiology. The child must know something about the stomach, the brain, and their functions before he can understand how cider or tobacco will injure them.

Certainly it will be admitted by all that time at least will not be wanting in lower grades for this instruction. We have recently introduced the kindergarten as an aid to primary work, and still there is room,

Interesting stories to illustrate the evil effects of drink and the filthy habit of using tobacco, opium and other drugs can be read frequently. If the teacher be thoroughly awakened to the possibilities of temperance, story papers can be procured for supplementary reading as early as second year.

If the State is in earnest let suitable papers be secured for all lower grades; the cost will be but a trifle, and discretion on the teacher's part, with use of tact, will enable her to introduce songs and recitations, illustrating our subject, even in the kindergarten department. Let this teaching begin with the pupils' efforts to read intelligently. Let more, infinitely more, of this literature appear in our ordinary first, second, third and other readers. Let mottoes be hung in the schoolroom alongside of "God bless our school" and kindred sentiments.

Let the primary teacher do her duty, untrammelled by the public opinion—to teach the child from an early age to hate tobacco, as little Robert Read did,—to loathe, abhor, to have his very soul, in the first lisps of knowledge, stirred with strong disgust, at the mere mention of the dark beverage of hell; and the battle for truer, higher civilization will be more than half won.

As soon as the child is able to read, at least at the beginning of the third year in school, he should pursue this branch with an endorsed text-book used for supplementary reading and as a basis of language lessons, with examinations. The language of the book should be simple and direct. "The house I live in," and similar books would be excellent for this grade of work were each chapter a little more extensive in its explanations of the effects of the use of tobacco.

This course might be pursued through the third and fourth years, with corresponding oral instruction, as mentioned for previous grades. Pupils of the fifth grade should continue this branch as a regular text-book study; as the basis for language, story writing and easy essays, or moral lessons.

In the next grade they will be ready to take, if thought advisable, a more advanced book of an endorsed series, as a regular study or reader, with written examinations, as a basis of language lessons and compositions.

Through the seventh or eighth grade this subject should be further pursued, in connection with physiology, as a regular text-book study.

Examinations and requirements for passing this subject should be as rigid as those for any other study in the grade.

The books for these grades need not teach technical physiology, but rather teach plainly the origin, nature, and effects of alcoholic drinks and tobacco, with enough physiology to understand some of the simplest laws of health.

The books of the first four or five years should lay particular stress upon the evils of tobacco and cider, as it is well known they are the stepping stones to the drinking habit. Many teachers can testify that one of the worst evils they have to contend with in the schoolroom is the effects of tobacco upon the young boy.

Parents and teachers do not seem to be as yet sufficiently aroused regarding the magnitude of the evil of the use of tobacco by the young.

As the use of alcohol is much less common among the young than the use of tobacco the latter is at the present time working greater injury among boys than the former.

In the lower grades, while fighting against alcohol it should be recognized that other evils, though more quietly, are just as surely sapping the strength and destroying the vigor of the youth of this generation.

But a very small per cent of our pupils, and those generally of the better class, the class that least needs scientific temperance, ever reach the high school. Therefore the preceding grades afford the only opportunities for the schools to reach these overwhelming majorities of our future citizens.

Thus we see the highest and best teaching of scientific temperance should be constantly given in those grades.

In this way, with competent instructors and good endorsed text-books, pupils who leave school at the end of the grammar or intermediate grades will understand why they should be total abstainers, and fit those who go on to the high school, who are to be the leaders of society and molders of opinions, to pursue a more advanced and technical treatment of the subject.

Experiments should be frequently made before each class, but they should be the illustration or proof of the statements of the lesson, which should be the chief thing.

The teaching of this subject has been made a ridiculous failure by the attempt in ungraded schools to make one book, and that often a high school book, fit all pupils. This instruction must be as well graded to the capacities of each class as the modern school readers are. Truth is just as true and scientific when told in easy words as when put into stilted technicalities, which the child can not comprehend.

We gratefully recognize the prodigious efforts put forth by the large publishing houses at great expense to place in our hands suitable charts and text-books, for showing the evil effects of alcohol and narcotics. Many of these charts and text-books have been largely used in our State. But said books and charts of the future must carefully avoid the error of over statement. Assertion without reason weakens a cause; the facts are sufficient.

The books should teach: That alcohol and narcotics are dangerous and seductive poisons; that as cider, beer and wine contain alcohol they are dangerous drinks and to be avoided; that they are the product of a fermentation which changes food to a poison; that it is the nature of a little of any liquor containing alcohol to create an appetite for more which is apt to become uncontrollable.

They must teach, also, the hereditary and acquired effects of these upon the human system—that is upon the whole being—mental, physical and moral. The appalling effects of the drinking habit upon the citizenship of the nation; the degradation and crime resulting demand that instruction here should give clearly and forcibly the warnings of science on this subject.

The effects of alcohol and narcotics upon the human system should not be appended at the end of the book, but should be stated in each division of the subject of physiology and hygiene; otherwise a text-book on scientific temperance will not create a strong temperance sentiment among the pupils using it.

Much wisdom was manifested in providing that this must be taught in the public school.

The law assumes that bad habits are largely due to ignorance. It would diminish the evils by removing the cause. It submits the solution of this great social problem to science. It demands the exact truth, and the teacher is called upon to conquer prejudice and to arm the inexperienced against temptation.

Such responsibility demands from the teacher all the moral courage he can gather.

With all our improved methods, with song and story, recitations, pictures, charts, papers and text-books all devoted to temperance instruction, every school should have in it a fearless, enthusiastic christian teacher.

It is a fact to be regretted that our superintendents and principals often fall very short of duty in this respect, from fear of meeting the disapproval of the patrons. We subordinate teachers are guilty of the same offense; still we have a right to look up to and expect of those above us the highest degree of moral courage in denouncing this evil.

And again, while I feel my inability to present suitable methods of instruction in this all-absorbing topic of the hour, and while I feel my incompetence to criticise anybody's work, it is certain the best work possible in this direction can not be done while any of our teachers, and especially our superintendents and principals, are addicted to the filthy habit of using tobacco in any form, or of using alcohol as a beverage.

The State gives us our arms; all we must do is to put them on, and with all the moral courage we have, fight for "Home, for liberty and for God."

THE STUDY OF PHYSICS.

BY PROF. A. E. HAYNES OF HILLSDALE COLLEGE.

ITS PRACTICAL IMPORTANCE.

Sitting in my room at a hotel in Detroit one day last week, listening to the sounds of the busy industries of our metropolis, the question came to me, how much of the success of these industries depends upon a knowledge of the topic to be under discussion in this place, during the present hour. Had I desired a clean towel or to send a message over continents and under oceans to the other side of the globe, my wish could have been gratified without leaving the room. Had I wished to know the probable weather for the next twenty-four hours or the conditions of the solar surface $8\frac{1}{2}$ minutes previous, I need not to have left the same room.

Had I desired to hear the voice of a friend hundreds of miles away or the electric light to enable me to read as the twilight gathered its gauzy curtains about me, it would not have been necessary to leave the building to have had the wish fulfilled.

These are but a few of the almost countless number of ways in which the study of physics has become of practical importance and which has differentiated and advanced, in so many ways, the civilization of the present from that of the past.

The proper study of physics furnishes the would-be-inventor with innumerable suggestions, while its laws furnish a safe guide in his investigations and point with accuracy to the region of future discoveries. [An interesting illustration of this is the invention of the graphophone.]

By the applications of the recent discoveries in this science the ancient methods of travel, manufacture and general business have been so completely revolutionized that men now living have seen vastly more progress than Washington Irving even dreamed of while portraying the character of poor Rip Van Winkle. Several years since Herbert Spencer summed up the matter in this way, in speaking of the practical importance of physics: "Joined with mathematics it has given us the steam engine, which does the work of millions of laborers. That section of physics which deals with the laws of heat has taught us how to economize fuel in our various industries; how to increase the produce of our smelting furnaces by substituting the hot for the cold blast; how to ventilate our mines; how to prevent explosions by using

the safety lamp; and, through the thermometer, how to regulate innumerable processes. That division which has the phenomena of light for its subject gives eyes to the old and myopic; aids through the microscope in detecting diseases and adulterations, and by improved lighthouses prevents shipwrecks. Researches in electricity and magnetism have saved incalculable life and property by the compass; have subserved sundry arts by the electrotypes and now in the telegraph, have supplied us with the agency by which for the future all mercantile transactions will be regulated, political intercourse carried on and perhaps national quarrels often avoided. While in the details of indoor life, from the improved kitchen-range up to the stereoscope on the drawing table, the applications of advanced physics underlie our comforts and gratifications."

Permit me here to call special attention to two other somewhat recent applications of the study of physics, of great practical importance to human wellfare in the saving of life and property, viz: the U. S. Weather Signal Service and the work of the State boards of health.

If one doubts the great value of either of these services, let him consult Sergt. Conger, the U. S. signal officer, at his office in this city (Lansing), and let him examine carefully the methods and aims of our State Board of Health, whose able secretary, Dr. H. B. Baker, has his office in this building (the capitol); and as his doubts are removed he will see now beneficently the work of each bears upon our individual, State and national welfare. He will be led to clearly see how the physical conditions around us sometimes peril our very existence, and how by knowledge of these conditions and some of the simple laws of physics, the conditions may be so modified as to avert actual danger.

The first three kinds of activities of greatest value in the order of their importance as stated by Mr. Spencer are:

1. Those activities which directly minister to self preservation.
2. Those activities which, by securing the necessities of life, indirectly minister to self preservation.
3. Those activities which have for their end the rearing and disciplining of offspring.

Do not the practical applications of physics have a direct, helpful and very important bearing upon each of these classes of activities?

May not work of our schools in some degree as far as recognizing the great importance of teaching this subject and teaching it well, be justly subject to the following criticism of Mr. Spencer, upon the schools of his own country: "That which our school courses leave almost entirely out we thus find to be that which most nearly concerns the business of life."

In view of the great practical value of this science alone, does not the recent action of our State University requiring the whole of the work of Avery or Gage in elementary physics, for admission to the freshman class, seem both wise and even necessary?"

Not the least interesting and important practical effects of the study of physics are the substitution of reasons for current vagueness and the removal of superstitions frequently met, with reference to the common phenomena of nature. As examples of vagueness take the oft repeated sayings, "The pitcher sweats, and therefore it is going to rain;" "The air sounds hollow, and hence

we are to have rain or snow." * As examples of such superstitions the following are perhaps an average: The planting of seeds in a certain time of the moon in order to secure the best results; the ill omen of seeing the new moon over the left shoulder, and the equally good omen of seeing it over the right shoulder.

As an interesting illustration of the superstitions as compared with the scientific method of accounting for the cause of a phenomenon, I will relate an experience which I had several years since with an Arrapahoe chief: On his return from Washington, in company with three other chiefs of the same tribe and the Indian agent, they came into my class room where I was using a large Holtz electric machine. Upon urgent invitation the leading chief was induced to place himself upon the insulating stool and to take in hand the chain connecting him with one pole of the machine; very soon his body was heavily charged and as I drew large sparks from different parts of his body and from points close to his eyes, not a muscle moved; he did not even wink, he seemed like a piece of marble in its rigidity and had a look so glum, and yet, withal, so disdainful, upon his dark features, that I became pleased; I then turned the gas on, and holding the Bunsen burner towards him motioned him to touch it; as he did so the gas was lighted, but to my surprise his features were as firm set as if they were made of steel; finally, I placed in his hand a piece of ice and bade him again touch the burner, the gas was as instantly lighted, and, as the flame flashed upward, he quickly jerked his hand away, his face seemed to shorten a finger's length in an instant, and the look of stoicism gave place to one of the most intense surprise: he looked at his hand, he looked at the burner, he looked at the machine and then at me, and finally, with an expression on his face never to be forgotten, he turned to his brethren, and bowing, gave one of the most significant grunts I have ever heard; it seemed as if whole volumes of meaning were contained in that one sound. Twice the experiment was repeated with similar results, and then these dusky sons of the western wilds sang one of their wierd, strange war-songs and took their departure. On returning to their tribe, so Major Hatton, the agent, subsequently

*Since preparing and reading this paper I have recalled the following scene which I observed several years since in a city in Michigan, and which furnishes a good illustration of how ignorance of one of the simple laws of physics on the part of people sometimes leads to their being most shamefully imposed upon. A man with an electric battery and a pulse glass stood upon the street corners surrounded by a large and interested crowd of men. He was telling them, in a voice like that of a town crier, of the almost miraculous, salutary effects upon the health that a current of electricity would produce. As an individual would become persuaded of his "condition," and who fancied that he had, at last, found the panacea for all his ills, stepped forward, he would be asked to take hold of one bulb of the pulse glass and as the heat of the hand expanded the air above the colored alcohol in the bulb and so drove it into the other bulb, this pseudo physician, looking as wise as Solon, proceeded to diagnose the case of the patient sufferer, enumerating various ills that human flesh is heir to and some of which it is not the heir, and then (as in every other instance), prescribed to his trustful patient the taking of a current from his electric machine. The "consultation" was free, and the uniform cost of each treatment was ten cents. By the eagerness with which his patients acquiesced in his opinions of their various cases and took his prescription; from the comments they made after the treatment, by the looks of satisfaction upon the faces of these deluded mortals and the bland countenance of the "doctor," one was constrained to believe in the truthfulness of the old saw, "ignorance is bliss."

Quite recently one of this class of "healers" has been in a section in the southern part of the State without the battery, but simply with the pulse-glass and bottles of so-called "medicine"—"cure-alls," with which, and a marvelous development of so-called "cheek," he has succeeded in filling his pocketbook from those of others, without giving an equivalent, except, perhaps, a little more of the wisdom of dearly-bought experience.

wrote, the chief upon whom the experiment had been tried, in relating the experience to the members of the tribe, said he had met a man possessed with the devil, laconically expressing the reason for his belief in the following language: "Indian he strike fire with flint, white man, he strike fire with ice."

How strangely different are the following words of the great Agassiz: "I will frankly tell you that my experience in prolonged scientific investigations convinces me that a belief in God—a God who is behind and within the chaos of vanishing points of human knowledge—adds a powerful stimulus to the man who attempts to penetrate into the regions of the unknown." And he further adds: "Of myself, I may say that I never make preparations for penetrating into some small province of nature, hitherto undiscovered, without breathing a prayer to the Being who hides his secrets from me only to allure me graciously on to the unfolding of them."

These two examples illustrate in an interesting manner the effects of the phenomena of nature upon the mind trained in natural science and one wholly untrained.

ITS EDUCATIONAL OR DISCIPLINARY VALUE.

But while all may admit the practical value of this study, yet there may be some who do not consider its educational or disciplinary value of a high order. To me it seems that that depends very largely on how one is taught the subject.

If the subject be simply read over, unaccompanied by experiments either by teacher or pupil, the discipline is of an inferior kind; yet this is better than no knowledge of the subject. If the subject be taught by the aid of experiments given by the teacher before the class, it is better than the first method, because the eye and sometimes the ear is called in to assist in causing the mind to apprehend the truth.

Again, the teacher may require the pupil to perform some of the simplest of the experiments while he performs the more difficult ones. This is even superior to the second method. But in my opinion the best method is that in which the pupil becomes the experimenter and the teacher is simply a wise director.

Let me here quote from two of our ablest works on pedagogy. One says: "It is what a child does for himself and by himself, under wise direction, that educates him."*

While the second says: "Whatever knowledge is taught a child should be so taught that the act of acquiring it shall be of greater value than the knowledge itself;† in other words, what is learned should be so learned that the operation of learning it shall be of more worth to the learner than that which is learned.

Now, the first of these methods, which may be called the reading and reciting method, does not correspond in any degree with the foregoing excellent maxims; the second, which may be called the reading and illustrative or showy method, does not correspond in any great degree with the high ideal held up before us in these quotations; the third or combination method corresponds in part, while the fourth or experimental method corresponds with these high requirements in every way. It is God's way as expressed in nature. Does a child learn that fire will burn it by being told so? By the

*Swett, †White.

last mentioned method perception is sharpened, memory is quickened, the judgment is made more accurate, the reasoning faculties are enlarged, the whole mind is aroused to activity, while eye, ear, nose, tongue and hand alike are made the ready and obedient adjutants of the brain.

Besides a clearer understanding of the subject under consideration, secured by this method, the drill in patience, self-possession and perseverance is alone of far greater value than the knowledge thus acquired.

All of these methods are found in the schools of our State. In very few of the country schools is the subject taught at all, and in these few it is usually by the first method. In a large number of the graded schools the subject is not taught; while in many of those in which it is taught it is largely taught by the first method, supplemented by a few pieces of apparatus, usually old in style and out of repair. In a number of the high schools and in some of the colleges the second is the prevailing one; while in a few of the high schools, notably that of Detroit, where I saw some very commendable results of it recently, the third or combination method is used; this is also used to a greater or less extent in some of the colleges. In the University, the State Normal School, the Agricultural College, some of the denominational colleges and perhaps in a very few of the high schools, the scientific or experimental method prevails. As to the superior value of this method, even in teaching the tables of compound numbers, a simple illustration will suffice. One day the little adopted daughter of one of the ablest teachers in the West came running home from school and he began to question her upon what she had been reciting during the day. In reply she repeated the table of liquid measure. Now, said he, speaking her name, go to the kitchen and bring me a gill of water; she took the dipper and brought him more than a pint. He saw at once that she had not been taught anything, but to speak mere words, without ideas. The mind of the teacher was suddenly aroused; he at once went to the tin-shop and ordered a gill cup, a pint cup, a quart cup, and a gallon measure, and on bringing them home, went with the little learner to the kitchen and producing the simple apparatus told her the name of the capacity of each and asked her to bring him a gill of water, to bring a pint, to find out how many gills are in a pint, how many pints in a quart, how many gills in a quart, etc. At the end of a short lesson of this kind, the superior results of a real knowledge of the subject on the part of the pupil were plainly manifest. Were we who are assembled here to be examined upon this same subject, do you think that we would be ready to take the second examination with as good results as this little child gave? If not, why?

The question that suggests itself here is, at what age should the study of physics be begun. My opinion is that this subject should be begun early; the activity of the sense in childhood and youth, if properly exercised, makes food for the mind in the more mature age. I do not agree with the distinguished speaker of last evening (Dean Alfred A. Wright), that the study of science should be completed at the early age of which he spoke. While it should be begun early, it should be continued into the maturer years; for its finest results are reached only with the fullest mental strength. The study of physics, under proper direction, is certainly an invaluable aid not only in stirring the activity of the senses, but in leading to reflection upon the phenomena made known by them. As an example of this, I often recall a sentence written by one of my pupils at the close of an examination in the subject of electricity. Said he: "This is the most wonderful subject I have

ever studied except the plan of salvation." Like a course of bodily training for a proper physical development, this study should begin when such training can be most successfully done in early childhood. The innate curiosity of the child is shown by its constant questioning and its almost uncontrollable propensity to learn the nature and construction of things by taking them apart for inspection. Why not direct these natural tendencies and properly develop them by allowing him to perform some simple experiments. Manual training can be best taught while the muscles are flexible and are most easily made to obey the will. Some of the most delicate manipulations require nothing less than this early training for the highest success in experimenting. Permit me to again quote from one of our foremost educators: "It is in teaching the elements of a science that the laboratory has the highest educational value."* Another feature of this study becomes of great importance when we recognize that it may lead to the discovery on the part of the teacher or by the pupil himself of the special gift of the pupil for scientific investigation and its consequent encouragement. A point we often overlook, and because of which our system of education has been in some sense at least justly criticised. In that most admirable address given before this association a few years since, by the late Pres. C. O. Thomson, he said that the machine a child needs most to know how to use is his own brain. True; but may it not be also true that in many cases, at least, that in order to learn to use his brain he must do it by using or making other machines? I here call to mind one of the most successful and promising young civil and mechanical engineers of the West, who has developed his brain almost wholly by this method. The experimental study of this subject has a moral training for the more thoughtful student. He here learns that Deity has his laws in the physical universe, such that when he questions nature aright, fulfilling the conditions of these laws, he is sure to receive the answer sought; and this knowledge of the method by which God works through these laws leads him to believe that the same Being has laws in the spiritual realm, the conditions of which being met, will give as sure and even more helpful results to his life in the way of experimental religion. His mind ought certainly to be made more catholic in matters of religion as he considers it in the light of such statements as these, viz.: Men know some of the effects of which electricity is the cause; they also know some of its laws; but because they do not know what electricity is, shall they deny its very existence with its laws and effects?

God's word says there is a Holy Spirit; we know some of its laws and have seen some of its blessed effects; but because we do not know what this Divine energy is shall we deny its laws, its effects, its very existence?

WHY IS THE STUDY NEGLECTED?

My answer to the foregoing question is that it is not because of a lack of interest in district boards, or a lack of apparatus, so much as a lack of properly qualified teachers. And this lack is due very largely to our own faulty system of instruction. Is it any wonder that a teacher who has never been accustomed to the handling of apparatus in experimenting should feel a lack of interest in such teaching, and even hesitate to undertake such work?

Perhaps a note here from my experience may not be out of place. I was

* White.

taught by the second method, the teacher giving all the experiments as a means of illustrating the text recited; as a consequence I had no training in the handling of apparatus, and at that time little dreamed that I would have occasion to need it. But alas! by the power of circumstances, a few years later I found myself before a class of Sophomores, in the presence of a large Holtz electric machine, for a series of experiments.

My desire to succeed was great, but the fear that I might not was greater. I, however, grasped the cat's skin with one hand and the crank with the other, and striking one of the paper armatures with the fur, I turned the crank in the desperate hope of seeing the flash from pole to pole, but not a spark was visible. I became more anxious, it seemed as if it *must* work. Why! I had even in my boyhood days drawn fire from pussy's back simply by stroking her fur, and now with all the elaborate machinery of modern science, I could not equal my early attempts! I grew desperately in earnest, the perspiration trickled down my face. [It would have been tears had I thought they would have helped the matter.] My hands became damp, the cat's skin became moist, and still I turned on, until the close of the hour, and the class was excused, with not a ray of light cast upon it by either the electric machine or the machine that turned it.

The hour seemed to be enjoyed by the class. My own feelings, however, were admirably described a few days since in our college chapel, by that noble woman, Mrs. Laura Haviland. She said that she had taught some twenty years in her younger life, and remembered how the boys and girls dreaded to write compositions. So they used to make all sorts of excuses, some said they had the headache, some actually became sick. One young man had put off writing his part until the last moment and he then chose for his subject "The Seasons." He began by saying that some like the spring best for, for the birds then come back; some like, like the summer best because, because, it is the time when the early fruits are ripe; some like the fall best, for it is, is, the time, time of harvest, and some like the winter best because, well, because they can then slide down hill, and closed by saying, "But as for me, give me liberty or give me death."

Fellow teachers I went out of that recitation room, humbled but not conquered.

During the hours that intervened between that recitation and the next, I was a diligent, faithful student of experimental physics. I had a very serious interview with that machine, in fact it was a battle, but it finally surrendered, and the terms of the capitulation were that it should never fail again, so long as I would meet certain conditions, and the covenant has been kept for more than a decade through rainy and sunshiny weather alike.

THE REMEDY FOR THIS CONDITION.

I do not blame a teacher for not undertaking a work for which he is not qualified; he is rather to be honored for *not* undertaking it under such circumstances.

I do find fault with our system of instruction in this branch. The remedy is, to adopt the experimental method as rapidly as possible in all our schools which furnish teachers, these in turn will teach the boys and girls of our country schools, and thus an improved condition will be brought about. The cost of necessary apparatus need not be large. Two hundred dollars, if

wisely expended, is sufficient to purchase a very fair lot of apparatus. For less than \$75 one can secure all the apparatus necessary to illustrate most of the more interesting and important practical application of electricity, as found in the dynamo, the electro-motor and the electric light. Expensive apparatus and showy experiments may be essential in giving a public entertainment, but they need form no part of a successful, working school laboratory.

An enthusiastic, qualified teacher of this topic will remove obstacles to his progress and that of his school, and even though he may not have been taught by the best method, yet with an overmastering interest in the study, combined with perseverance and a fixed purpose to succeed, he *will* succeed in a large degree, in removing many of the defects of his early training, and in awakening an abiding interest on the part of his pupils in the questioning of nature by experiment.

When we thus teach, our pupils will be able to do likewise and thus shall we progress; while the boys and girls, the men and women of the future, with eyes trained to observe the beauties of earth, with ears attentive to its sounds, with senses all awake to the lessons of nature and with hands deft in manipulation, as they obey the will, directed by a trained judgment, will be better able to appreciate the work of the Great Geometer, whether in crystal or in planetary orbit, and to comprehend the wonders displayed in both atom and star alike.

They will be more ready to reverently say: "Great and marvelous are thy works, Lord, God Almighty."

SUMMER NORMALS: THEIR PLACE IN OUR EDUCATIONAL SYSTEM.

BY SUPT. J. W. SIMMONS, DOWAGIAC.

The educational system of our country has been undergoing a transformation. The awakening and progress made during the past few years are perfectly astonishing. The means for the accomplishment of ends desired to be attained have rapidly multiplied, until, in our haste to partake of these so-called advantages, we have failed to distinguish the genuine from the counterfeit.

We have a magnificent University, whose name and mighty works are on the tongues of men in every quarter of the globe. At the other extreme, we have a vast public school system, so extended that it requires an army of 11,000 teachers to supply the teachers' desks in Michigan alone.

Owing to frequent changes, about 16,000 persons annually find employment as pedagogues. The school census of Michigan shows an enrollment of 620,000, a little more than two-thirds of them being enrolled in the public schools.

The military system of the country has its West Point, from which are sent those professionally trained men who have to deal with the raw recruit.

Our school system has its State Normal, where men and women are prepared to combat the elements and forces of ignorance and superstition, and, by systematic and professional methods, lead the inquiring mind toward those heights from which it can survey the grand, comprehensive plan of creation; and thus the same mind equipped with development, force and lofty ambition, can go forth into the valleys of thought, can go forth upon the plains of knowledge, can go forth into the vast mountain fastnesses of hidden resources, and can command them all to do its bidding.

Our high schools, colleges and University are doing some of the work belonging to the field of normal instruction. Yet, in view of all these facts, we find a large percentage of the work being done, is purely that of amateurs; in many cases mere boys and girls.

Not long ago, because of several disastrous fires connected with the wrecking of trains, a great, popular demand was made for a more perfect car heater. In answer to this demand, many devices were brought before the public, but the majority of them were defective.

The popular demand has been made for better teaching, which means more professional skill on the part of the teacher. In answer to this latter demand, many schools of many kinds have sprung into existence, each claiming to have discovered the short and royal road to perfection in the art of teaching.

That many of these have proved to be shams and impositions, is well known. Many of them have taken the name of Normal, or Summer Normal. By normal we are to understand that a school properly bearing that name is an institution where teachers receive professional training; and yet many of these so called normals have no indication of a professional course except in the name.

If these summer schools, bearing whatever name they may, are to become a part of our educational system, they must show that there is a genuine demand for the kind of work they are doing. The majority of them are schools for review, and the main part of the review is a cramming process preparatory to the coming public examination.

Our school system is broad enough to include all legitimate wants for the study of the text-book as such. What we need is more professional training. There needs to be a careful and thoughtful study of the human mind in its development and in its workings at all stages of its growth.

One of the requirements of a teacher's certificate is a knowledge of "theory and art." That this knowledge is very crude, and the examination concerning it is generally a farce, is too evident to be affirmed or disputed. Of the teaching force in 1887, only 318 held State or normal certificates, and only 2,500 had ever attended a normal school. Consequently, more than seven-eighths of the teachers of Michigan need professional instruction. The thoroughness of a teacher's searching after the knowledge possessed by his pupils, will determine, in a large measure, their carefulness in the preparation of lessons. Theory and art mean something. They should stand at the head of the list instead of at the foot. To obtain a certificate, the applicant should possess a practical working knowledge of the principles of psychology. Less emphasis should be placed upon per cents in grammar and arithmetic, and more upon theory and art. The fields of work for teacher and pupil are not identical. The pupil is aiming to develop the resources of his own mind, but the teacher is to guide the development of minds other than his own.

Almost anyone can daub the colors upon the canvas, but only the professional can so arrange them as to bring out all the possibilities of the art.

It will be the object of this paper to inquire into the conditions attending our public school system, the growing need of the hour, and the merits of the helps offered; keeping in mind the fact that we are not arguing for or against the summer school as an adjunct of our public school system, because as such it is not needed. If it has a true and legitimate place, it is for the purpose, as Chancellor Payne says, "of supplementing the work of the normal school; to do a little of the work it should have done, but which it has not had the opportunity of doing."

The summer normal is becoming a very fashionable appendage to our educational system. Many Chautauquas, great and small, during a few weeks of the vacation period, dot our principal summer resorts by lake or river, as well as in the city or many of the villages.

The danger does not lie in that they may accomplish too much in the way of mind development, but in the fact that much of their work may be and often is very superficial.

It is to be regretted that the majority of the pupils in our public schools are not actuated in their work by higher motives than gaining per cents or public approbation. More sincerely and deeply is it to be regretted that many instructors do not hold more worthy mental stimulants before their pupils than these same per cents.

Many of the so-called summer normals are no better in these respects than some of our public schools.

A goodly percentage of those enlisted in this army of 16,000 work solely for the almighty dollar, regret when the day begins, and rejoice when the day nears its close. It is the same with the pupils under their tuition.

To my certain knowledge, some of these summer schools are managed by persons whose highest motives are worldly gain, and those who attend do so hoping that they may get some suggestions that may help them in the examinations which are near at hand. In short, they are managed and attended, largely, through selfish and unworthy motives.

For fear I may be misunderstood in this discussion, I desire to now state that I make two classes of these summer normals, one of which has a true and legitimate place in our educational system; the other I look upon as counterfeit and dangerous in its tendency, and the sooner this second class is relegated into obscurity the better will it be for the grand cause of education in our State. But few, if any, of those who attend these schools do so for the purpose of getting or acquiring aid other than that which may help them in obtaining a license to teach. Somehow, the idea is prevalent that scholarship is the one prerequisite to teaching.

How long would a person who styled himself a bridge-engineer find employment if his working capital consisted in knowing how to measure lengths? how to cut rods and beams? how to elevate materials into position and fasten them in place? He must have a knowledge of materials as such. He must know their tensile strength and their relative values. He must study the philosophy of the entire subject in all of its varied phases. In fact, he must be greater than or superior to the structure that he would build.

The case of the teacher is similar. The teacher is to take pliable, human material, and he is to build it into a structure that we term womanhood and manhood. This structure is for a purpose. It is not to be dead, senseless material, but is to be a living, thinking, moving, acting organism, capable of developing the wonderful resources of the universe of God, and materially aiding in the glorification of His eternal kingdom. The mind is to become a spring of living thought, unceasing and enlarging in its operations. The goal that it reaches, and the possibilities of development, depend largely upon the initial steps. The adage, "As the twig is bent so is the tree inclined," is applicable to child life developing into the possibilities of the future.

How many teachers are there who fully realize the sacred responsibility they assume when they enter the schoolroom as teachers? They can ring the bell at the appointed times and lock the doors when the school is dismissed. They can mark the attendance and make a record of the absence and the tardiness. They can assign lessons, and, in many cases, can follow the narrow groove of the text-book in ascertaining the correctness of the answer. In fact, the whole system is a routine of treadmill duties and tasks assigned, unleavened by the active principle that to educate means to stimulate thought. To educate means to develop the inborn possibilities of the image of God.

It has been beautifully said that the true sculptor stands before the block of marble, chisel in hand, not ready to strike unmeaning blows here and there, but prepared by previous professional education to proceed methodically to liberate the imprisoned forms within. The preparatory training of

the true artist prepares him to draw the veil that separates the seen from the unseen. He looks upon a senseless block of marble or granite; his trained and skillful eye penetrates the mass to its very center. All the possibilities of form, posture and finish spring into existence, and his further work is devoted to development.

Child life is more precious than marble. Accidents of workmanship can not be effaced. Each line is indelibly stamped thereon and will endure even into the eons of eternity. The schoolroom is not the place for the practice of much empiricism. The results of careless or ill-advised experimentation are too costly, too dangerous in their tendency.

White's definition of the ends of education should be before the teacher as a cloud by day and a pillar of fire by night. He says: "The one comprehensive end of education is to prepare man to fulfill the purposes of human existence; *i. e., to live completely.*" "The purposes of a complete life touch all the relations of man *as man*, and hence tax all his powers and activities."

While in the pursuit of observed information as related to the subjects of natural history, we have been annoyed and pained to find a specimen deformed because of some interference with the laws of development. More frequently do we meet these abnormal cases in the school-room than would appear upon first thought.

The unprofessional teacher has but the one pattern after which to formulate all minds and souls. He murders individuality, throttles original thought, and tolerates only slavish imitation. It is impossible to unfold and furnish the human soul by pattern. "The laws which govern the activity and growth of its powers must guide in its training" Dr. White says, "The teacher must be an artist, and the teacher of a child the artist of artists." The art of acquiring knowledge is greater than the knowledge itself. Power is developed ability for action. We regret to say that very often this development of power is long delayed. We fully agree with one who has said that "children are kept swinging on the gate of sense when they should be prepared to make easy and fruitful excursions into the garden of thought."

The pupil acquires knowledge only by putting forth an inner energy. This can be best accomplished by systematic processes of thought training. Carlyle characterizes his instructors as "hide-bound pedants, who crammed him with innumerable dead vocables, and called it fostering the growth of the mind." White says, "knowledge is necessary to enlighten and guide in all human effort, but mental power gives acumen, grasp, strength, poise, inspiration, and these are the winners of success in all the duties of practical life."

If the summer normals are tested by the above desired results, will they prove to be genuine or counterfeit? I firmly believe they will not all bear thorough investigation. Our State department cannot prevent schools from coming into existence, but it can and should withhold the expenditure of State funds when they are to be used in a non-professional way.

We know of examiners who would expend these funds judiciously and the results would be highly satisfactory. We know of others who have even asked for these funds, and we must say that it would be a grievous error were they allowed to expend them. I do not believe that State aid should be given, outside of our professional schools and university, for the purpose of merely instructing in the elementary knowledge of the branches of a common school course. The few weeks given to the work of a summer normal are insufficient to impart a wholesome knowledge of the subject. If they are de-

signed as schools of review, then they presuppose that the subject has already been carefully studied. But many of them serve neither of these purposes. The intent of the instructor is to pocket the funds, and the object of the pupil is to cram for examination.

Some of these normals charge a tuition and also ask State aid in addition to it. To increase the enrollment, the coming examination is used as a whip to compel the attendance of many who would not otherwise attend. This is all wrong. It is not the way in which genuine teachers are developed. Consequently, we say that such schools have no place in our educational system, and should not be recognized by State authority.

Chancellor Payne says, that "It cannot be too much insisted on that a school of given grade should have for its teacher one who has been educated in a school of a higher grade." If this be true, do these so-called normals stand the test? Most certainly not! The instructors often have no higher conception of the work than those who come to be instructed. Can a fountain rise higher than its source?

Say: "Beware of these false prophets which come in sheep's clothing. Ye can know them by their fruits. For, do men gather grapes of thorns or figs of thistles?"

It has already been inferred that the legitimate work of the institute and summer normal is that of a professional character. An author previously quoted, says: "If our public school service is to be administered, in great part, by young persons who have made no study of the teaching art, the distinctive function of the institute (or normal) is to provide some training for these non-professional teachers.

"The design is to elevate teachers so they may be made to survey their work from the summit of a lofty conception, and then, forever after, this work will be done in a new spirit, under a kind of inspiration."

As the institute is but a normal under another name, we include it in this discussion. Even these are undergoing a transformation. The time is being extended from one to two, three, and even four weeks. This enables the conductor to lay out his work more economically. He can combine textbook instruction with the applications of methods and principles, making the latter more prominent than the former. The old fragmentary and often aimless lecture system must give place to the scientific development of psychological principles. This work is not the work for the amateur. The instructor must be a person who has carefully surveyed the field from the summit of this lofty conception. His work is to teach teachers. He is to enthuse them with the beauties of the intellectual heavens as they view them through the wonderful powers of this educational telescope.

"Psychology stands in the same relation to teaching that anatomy does to medicine."

We claim that it is impossible for a person to properly develop the powers of the mind unless he has first studied the activities of the mind from a scientific standpoint. Matter, method and spirit are the endowments of the accomplished teacher, and the legitimate work of this summer instruction is to properly endow those who seek for the truth.

The field of work for the institute is not identical with the public school, yet it has been degraded through the unprofessional handling of those who look upon these institutions as opportunities for primary reviews.

We have already stated that a secondary object is review, but this review

must be conducted with a large admixture of sound pedagogical principles, or the work will not be enduring.

Many persons are capable of receiving a large amount of educational food, but they possess no power for mental assimilation. Those who attend the institute or normal have but little if any practical knowledge of mental philosophy. In view of this fact, the instructor must, at first, deal with the elements, but gradually and persistently progress toward the citadel of the subject. The instructors must take it for granted that those who attend have already some competence in the branches to be taught and their efforts should be directed mainly in leading them to know how to instruct, how to organize, how to govern. The text book teaching attempted should be for the purpose of giving practical illustrations of the theory and art of instruction. We then affirm that the so-called summer normal that is conducted merely as a school of hasty and, of necessity, superficial review, and often by persons of no professional knowledge, has no legitimate right to claim State recognition or to receive State funds.

In our institutes and recognized summer schools, there should be a large amount of work accomplished along the line of instruction in psychological principles, at the same time showing the hearer how to apply the same to the work of instructing children in our public schools.

It is then the duty of those in authority to only sanction those institutions, those agencies, that can conform to this legitimate test.

[DISCUSSION.]

PRES. L. R. FISKE said :—Mr. President may I take just one moment to draw a parallel? We are in danger of using words without fully considering their meaning. We have some purely professional schools. How do we conduct a law school, how a medical school? These are purely professional. The work of the law school is by no means confined to the application of law, the organization of courts, the drawing up of papers. The principles of law are taught, all the principles of law. The method is the same in a medical school. If these are professional schools conducted on this plan, is not the Normal a professional school notwithstanding the branches which the student is preparing to teach are themselves taught? I know of no other way successfully to carry forward a Normal school than to teach the several branches by the best method, and to show that such method is the best. Thus will the student get the most complete preparation for the work of the profession he is to enter.

SECRETARY ORR SCHURTZ said : The topic under discussion of necessity leads the careful thinker to a question of great importance to the educational interests of this State, a question that cannot well be left out of consideration, a question that is bound to force itself to the front and demand a solution until settled right. Before I call your attention to this particular feature of the subject, however, it will be well to trace hastily the steps that naturally lead up to it.

The summer normal is a thing of recent growth. It sprang up in a night, almost, and its mushroom development has mingled the good with the bad, the poisonous with the wholesome. A different outcome could scarcely have been looked for. When we consider for a moment the occasion that gave rise to this particular feature of school work in Michigan, we need not be greatly surprised that the much heralded "summer normal" is here, and that it is what it is,—a thing peculiar to itself. Previous to the

law of '82, which put in force the present system of examination for all but city schools, we had nothing of the kind. To secure the attendance of enough teachers at the regular State institutes to keep the breath of life in them, was a task. The average teacher not only did not trouble himself about learning proper methods, but he did not worry about being even moderately well posted in what was supposed to be necessary to one who aspired to tread the teacher's path. There was nothing to demand or even encourage preparation for teaching, either in scholarship or methods. There was little or no comparison, so far as the public was concerned, between results obtained by the live, active, well prepared and successful teacher, and the weak, unsatisfactory, beggarly results obtained by those incompetent in scholarship, incompetent in methods, incompetent in tact, judgment, everything. Can we wonder that such a system should lead to weakness, inactivity, dry rot? Can we wonder that teachers made no effort to grow better and stronger? The very condition of things placed a premium upon listlessness, carelessness, and this condition of things was the natural outgrowth of such a system.

But with the new law, imperfect as it was, lacking as it did one of the most essential elements of strength, there came a sudden change. An element heretofore well nigh eliminated, the test of scholarship became a problem for every aspiring teacher to solve. To attempt its solution was to cast about for means to solve it. Those who before had been able to pass muster and slip through a very small hole into the ever numerous ranks of the elect, found, all at once, the pedagogical horizon extending and receding beyond them. Where they before could stand, and with ease strike the head against its dome, and stretch the hands to its remotest boundaries, they now found themselves lost in a wide expanse of ignorance. There was a sudden rush to the high school and the graded school. Almost every school of high or low estate had its teachers' class. The first and all pressing demand was for schools that could cram a great amount of learning into a very little amount of time. It was not the "how to teach," but the "wherewith" that was in immediate demand. The graded schools came to the rescue and did a good work. With book knowledge they gave, also, a taste for methods. The requirements for a higher grade of scholarship and consequent demand for better teachers brought with them a call for summer classes and summer schools. Later, this demand became an earnest desire on the part of teachers to learn more of methods and principles. At first this demand for summer schools came about, not because sufficient scholarship could not be had in graded schools, but because it could not be got in large doses in a very few days. In every county were schools, where could be had at very trifling cost, a thoroughly good preparation to teach, so far as mere book knowledge was concerned. These schools were upon every hand, at the very doors of those with inclination and desire to avail of them. But they were not run at sufficiently high rate of speed. They could not turn out with a four weeks' grind, a hopper full of full-fledged teachers. The cry was for something speedier. This led to increased attendance upon the State institutes, with the hope of being able to absorb enough knowledge in a week's trip through the fields of lore, to enable the ambitious aspirant to squeeze through an examination held at the close. When this did not suffice, the summer normal stepped in to fill the void.

We do not get at the root of the matter when we assert that the summer normal exists because of the selfish and pecuniary interests of some who conduct them. There is something beyond this, of which we must not lose sight. I assert, and I have weighed the matter carefully, that these summer schools exist because there is a wide

spread, earnest, and constantly growing demand for them on the part of earnest, thoroughgoing, progressive teachers. With equal emphasis and positiveness, also, I assert that this demand is only a mere outward expression of a deep-seated and rapidly increasing desire on the part of a large body of successful teachers and careful thinkers for a school in Michigan that shall furnish a strictly professional training for teachers. A school that shall make a business of training and fitting teachers for the public schools, a school that shall not take upon itself the triple burden of furnishing all who may apply sufficient of the merest rudiments of the various branches to enable them to pursue academic work, and then give three-fourths of the remaining time to this academic work, doling out grudgingly the other fourth in the vain endeavor to make teachers. This demand cannot be met by the institute and the summer normal. These have their part and parcel in the general work, but they by no means suffice. They are the mere scraps that dull, but do not appease the appetite for something more substantial. How, then, shall it be met? Can it be met? Is the State doing what it can to meet it?

To arrive at a satisfactory answer to this question, we need to divest ourselves of all partisanship, all former inclinations and prejudices and investigate honestly, conscientiously, unaffected by opinions previously formed, prepare to concede that we may have been mistaken.

Michigan supports a law school where absolutely nothing but law is taught; a medical school where students get a thorough training in medicine, and nothing but medicine; a dental school that turns out nothing but dentists; a farmers' school, intended solely for the farming classes; why not a school for teachers, whose chief end and aim shall be to make teachers of its students, where none but those already provided with a thorough elementary education, and who hope and expect to make teaching their business in life shall be received, where the lines shall be strictly drawn between academic and professional work, where mere academic instruction shall be relegated to a second place; and where it shall be known and understood, where the very atmosphere shall proclaim it to be a teachers' school, whose sole purpose shall be to fit those who come with necessary scholarship already acquired, to guide, instruct and mold our boys and girls to intelligent, useful citizenship.

No one here present will dispute that mere attainment of learning does not prepare one for the teacher's high calling. I care not of how high an order mere literary attainment may be, even though it include the university or college training, that of itself, does not fit any man or woman to become a teacher, no matter how broad and liberal his general makeup may be—such an one lacks the one essential, the all important thing—the knowledge of how to impart to the pupil what is locked up within himself. He does not know how to pour the dew of his own store-house of blessings into the child mind, tenderly, judiciously, wisely, so that the plant he nourishes may spring up to finely proportioned, delicately rounded, beauteous, strong maturity. Whoever enters the teacher's work without the knowledge of methods, does so unprepared and incompetent to discharge his duties. He arrives at a fair, or the highest measure of success, only after much blundering and experimenting and failure, to the serious and life-long injury of those at whose cost he finally comes off conqueror. Thus far, it seems to me, there is little or no room for argument. What has already been stated are only stubborn facts which all who have had any considerable experience in school work, I think, will readily concede. The greatest educational institution in this State, and one of the greatest to be found anywhere, conceded and proclaimed this when some ten years ago it established a department intended to supplement its broad and thorough scholarship

with a direct and special training for those of its graduates who might wish to become teachers. For ten years this work was carried on under the guidance of one whose name is familiar to school men the country over, and it is continuing under another equally as eminent. If you will turn to the report of the State Supt. of Public Instruction for '80 you will find that the Board of Control of the State Normal School took the same ground in 1878, when it adopted without a dissenting voice, a plan of work having in view a radical change, and declaring that the time had come when the normal school "should be relieved of a large share of its preparatory academic work, and thus be enabled to confine itself to legitimate professional instruction of teachers for the public schools;" "that, aside from general reviews in connection with professional instruction, the normal school proper should be confined to professional instruction."

For reasons with which I am unacquainted, these plans were never carried into effect, save those relating to the school of practice. Can it be possible that with a grand total of 15,566 teachers actually employed in 1887 (Supt Estabrook's report) there is not room in Michigan for a school that shall put its full strength upon a strictly professional course and make academic work entirely subordinate?

Two of our State schools, up to a certain point, give an equal amount of training for teachers. The instruction in the theory of teaching is of the same amount in University and Normal School. In addition to this theory, the Normal School requires its students, during a part of their senior year at least, to spend one hour a day in the practice school (amounting to about forty days' teaching in all), under the guidance of an experienced director. In this only does it do any more to fit its students to teach than the University.

Now I wish to state right here that I am strongly in favor of the State Normal School. It is an element in our educational system that cannot be safely left out. I believe the State should extend to it the most liberal support, but I do not believe it should forget or ignore the object for which it was created and is now fostered. I believe it should either cease doing so much academic work and put its strength upon the work of training men and women to teach, and that alone, or change its name, continue what it is now understood and recognized to be,—a school where can be had a good, liberal common school education, and cease to lay claim to being a Normal School.

I hope before any one of these teachers before me jumps to the conclusion that the speaker is trying to be sensational, he will listen patiently to further arguments that present themselves to my mind, that have made a very deep impression upon me.

No one who takes upon himself the burden he assumes in accepting the secretaryship of the schools of a county, and who devotes all his energies of mind and body to the task, can fail to be impressed with an honest belief that, so far as the State is concerned, she is doing practically nothing for the common schools, toward giving them trained teachers. He labors and struggles amid the discouraging circumstances constantly surrounding him, chiefly from the lack of adequate teaching material upon which he is forced to depend, and sees progress evolving at a pace than which the speed of a snail is inconceivably swifter. Casting about for help, seeing no straw at which to grasp, and ready, almost, to give up in despair, he naturally turns his eyes longingly to that State institution whence he has just right to expect succor. Naturally he asks why this school cannot reach down to the common schools and lift them up. In this state of mind he is apt to hail with delight any school that promises to help him, no matter under what name it sails, be it summer or winter.

For my part, I cannot conceive how the State Normal can view with so little self concern the constantly increasing number of normal schools springing up all over the State. Why should it resign to these numerous and, for the most part, weak schools its own legitimate work? And yet, it seems to me, this is the natural and inevitable result of its present policy. Of all the seven distinct courses of study pursued at the State Normal (for the eighth is only a musical course) but one requires less than four years, and of these four years the strictly professional work does not consume more than five months, or about one-eighth of all the time. The result is that the very atmosphere at the Normal is academic. The work of training teachers for practical work is relegated to a very subordinate place. It may be a surprise to some, but the fact is that all the "professional training in common branches, arithmetic, grammar, geography and reading" is done by subordinate teachers, whose names are unknown outside the walls of the school, none of whom, I believe, have had any considerable experience in common school work. None of this work is done by the professors, the only teachers there who have the experience to do it.

The speaker recently paid a visit to this school with the purpose of getting some insight into its practical workings. He visited four different class rooms during the forenoon. In the first was a class doing the "professional training in reading." This class was reciting^d in orthoepy, dividing words into syllables, marking them diacritically, and giving rules for such marking. It was found that a goodly share of the time laid down in the course for "professional training in reading" (one hour a day for five weeks, in all 25 hours) was not spent in instructing these students how to teach reading. This class was conducted by a bright, active young instructor, but not by one of the professors.

Professor Bellows' class room was next visited, and a class in arithmetic heard. The same kind of instruction was being given as would be expected of any arithmetic class in a good high school. At the close of the recitation Professor Bellows was asked how much of his time was given to training these students how to teach arithmetic. "Not any," he replied. "But," we returned, "your catalogue calls for a certain amount of professional training in this branch." "O, yes, but that work is under Mr. ———, just down the hall." "But do you, the head of the department of mathematics, give no instruction in methods?" "I used to," was answered, "but the time allotted to it was cut down to five weeks, and it became such a perfect farce that I would have nothing to do with it. Before this, there was by no means sufficient time, and now there is practically none."

The next hour found us in Mr. ———'s class room, where the "professional training in arithmetic" was going on. During this hour, nearly the entire subject of common fractions was gone over. Any superintendent of experience is able to judge how much of methods in fractions could be given to a class of teachers who were supposed to know nothing of methods, in that length of time. It is unnecessary to lay the fault to the teacher in charge. If he must give the entire training in 25 hours, he must of necessity skim the ground. Here again, this important work was relegated to a subordinate teacher, instead of being done by the professor of mathematics.

We learned, upon inquiry, that this teacher had never had any experience in common school work, save what he got during a single year in a small graded school, an experience which, no matter how bright his natural attainments may be, could not fit him for such work.

During the next hour we listened to a class recitation in history under Miss King.

At the close the question, "How much time do you give to methods of teaching history?" was asked. "None, save what comes up incidentally, but these students observe the order in which the subject is handled, and so get an idea of how it should be taught." This observation, we are all aware, is equally applicable to any school.

Here then again, the head of the department, the one best fitted to give instruction in methods, was giving nothing but academic instruction.

The afternoon was spent in the school of observation under the painstaking guidance of Professor George. This, in our opinion, is the especially valuable feature of the Normal School. Without this, it seems to us, it would have little claim to the name of normal school. In this work, the fourth year students get a taste, at least, of practical school work. They are not able to get much beyond this, for assigning to each the maximum time given for practice teaching, he gets less than two months' experience in all, and this at the rate of one hour a day. But, so far as it goes, it is very valuable. The amount of this kind of work could be greatly increased, and in connection with it could be given the necessary amount of training in methods, if the academic work were reduced as it could and should be.

It will not do for those directly connected with the Normal to meet the agitation of this question with the crushing argument that it has been agitated for the past 20 years. Nor is it safe to meet it with the argument that the school is compelled to do this work because of lack of preparation on the part of a large body of the students who come to them. Take the Normal School catalogue, compare its course of study with that of scores of high schools all over the State, and you will find them almost identically the same. The Normal School, in the greater part of its work, is duplicating and infringing upon the work of the public schools (the exact words of Prof. Bellows). It is not doing one-fourth the strictly professional work it should do, and which it is commonly supposed to be doing.

To take a short cut to what this all leads to, I am firmly of the opinion that we shall have too many summer normals, and summer normals that are not far from being a positive injury to the school interests of Michigan, so long as there is no school that makes a business of training and fitting teachers for the public schools.

I do not believe it to be the object of a summer normal, or any normal, to give those who wish to teach a knowledge of the branches they may pursue in the common schools. A normal school should train how to teach, after a sufficient knowledge of the branches to be taught is once obtained. A normal school should not undertake to give the same instruction that may be had in graded schools, all over the State, aside from what would be necessary by way of reviews. Let students obtain technical knowledge of branches they are to teach, then let the Normal School receive them and make teachers of them. Such a policy would save time and cost. It would increase the number of trained teachers. It would greatly benefit the public schools. Advocating this is doing only what the board of control and the Normal School faculty took decided ground in favor of ten years ago.

THE TOWNSHIP UNIT IN OUR SCHOOL SYSTEM.

BY PROF. S. D. BARR, ALBION COLLEGE.

The only guaranty for the success and perpetuity of republican government and institutions is found in the intelligence, the virtue and patriotism of the people. If our institutions are threatened today by a heterogeneous horde of immigrants from Europe, it is because they are ignorant and vicious, and because many of them not only do not understand our institutions but hate the free government that protects and blesses them. They have been reared to maturity under institutions and conditions widely different from those they find here, and it is now too late to change them to any considerable extent. If their children shall become better citizens than they are, it will be because the State shall use, during their childhood and youth, effective means to educate them, to engender in their minds and hearts sentiments of virtue, morality and patriotism. If we would thin the ranks of vice and crime, in which are now found so many thousands of native American youth, we must cherish a most solicitous regard for them, and be moved by a strong purpose to early and properly educate them to mold their characters to virtue and inspire their hearts with a genuine love for the great brotherhood of man.

It is our deep interest in this great question that has brought us face to face in the State's capitol, and moved us to consider the present topic:

"THE TOWNSHIP UNIT IN OUR EDUCATIONAL SYSTEM."

At our session held a year ago a very able and exhaustive paper was read by Hon. H. R. Gass, in which he treated the subject from the standpoint of statistics, and presented a large number of advantages that Michigan would gain by an immediate adoption of the township system. That paper was published at length in the last report of our State Superintendent of Public Instruction, and I presume that a majority of those now present heard it at the time of its delivery. I am frank to say I can add nothing of importance to the exposition then made of the nature and working of the system. I earnestly recommend to any who have not heard or seen that paper, that they read it at their earliest convenience. I should not omit to state, for the benefit of any who may not have yet read the last report of State Supt. Estabrook, that he has therein made a very thorough and instructive statement in regard to the township district.

Therefore it is not my intention to carefully traverse the ground so critically examined by these men, but to attempt to say something that may stir up our mind by way of remembrance, and lead to such action on the part of this Association as shall move our State Legislature to adopt the township system.

It is a very important fact that the power of Michigan to educate her children has been rendered ineffective and squandered by depositing it in over six thousand school districts, and giving them individually and practically almost absolute power over education within their own limits. And as, under the feudalism of the middle ages, the barons came to have more power often than their sovereign, and obeyed him only at their pleasure, so in this year of grace, in Michigan, the people in the several school districts have school or no school, a longer or shorter term of school, and a good, bad or indifferent teacher, with little regard for the purpose or the welfare of the State. Hence, in the majority of districts, education for years has been and still is almost at a stand-still.

This state of things should not be permitted longer to continue. The present is the time for action. These rural district schools must be stimulated. They are now entirely disjoined, many living but a weak life, most of them a sickly one, while some are dead as far as serving any useful purpose is concerned. A multitude of their teachers, young and inexperienced, immature and uninformed as they are, with narrow views of the wants of their pupils and of the proper modes of developing and inspiring their minds, fall shockingly far below the proper standard for a true teacher. Under such circumstances the intellectual, social and moral spirit of the school is necessarily feeble, indefinite and void of vigor and purpose. A school needs a teacher who will stir it up and set the children to thinking, and awaken in them emulation, ambition, and induce an appetite for information, an ardent love for scientific truth.

But some mummified wiseacre will say: "We can expect nothing better. While the districts are so poor, and the people are so ignorant, it is useless to hope for or attempt much improvement." We say no! A thousand times no! It is not hopeless. We are amazed that so much that is desirable has been accomplished under so unfavorable circumstances—school and teacher practically isolated from the rest of the world. I cannot immure myself in a dungeon, shutting out the vitalizing air and the revealing light, the beauty of landscape and sky, the grandeur of the heavens, the intense and stimulating life of the great, busy, struggling world outside, and, feeling no throb from the great heart of society, without any definite object, any lofty purpose to stimulate me, thus maintain a healthy, vigorous life. I must go forth at high noon and, standing under the open sky, look upon and know this active world and its interests, its life so full of energy and purpose, and from this teeming world, with whose life and destiny mine and my children's are linked, I must take its best life, its energy and power, its best knowledge, its loftiest purposes, its mighty aspirations into my life. I must touch elbows with my fellows. I must look them in the face, and hold intercourse with them. Standing in line with them in society, I must clasp hands with them and receive, as by an electric shock, the invigorating stimulus of their intellectual and spiritual life and power. So it is, and forever must be, with the public school teacher. He cannot be truly successful unless he measures up to a higher standard than these isolated districts set up, each for itself.

Now I do not wish to be understood as saying that the people in these isolated districts are, in the general sense, ignorant, not intelligent as regards the social, political and religious questions of the day; but I do mean that they are from the very nature of their situation and manner of life, profoundly ignorant regarding the essentials of what can be justly ranked as a good school or a good teacher for this, the last quarter of the nineteenth century. The world has been moving at a rapid rate, educationally, while they have been side-tracked. True, they have escaped much that might have harmed them, but a vast deal has escaped them that might have been useful to them and their children.

As affairs now are, under this system of isolation, which is a system only in name, the grade of the school, the general plan on which it is conducted and the kind of teacher employed are determined by the amount of money received from the State, the amount of taxable property in the district, the estimate the voters therein put on an education, the intensity and intelligence of their love for the children, and often by their preference as regards what friend's or relative's son or daughter shall attempt to teach the school. Under this state of things, capable and efficient teachers, as a rule never have been and never will be employed in the rural districts.

In some districts the children have school open to them only one-half or one-third as long as those in other districts of the same town, and of the same grade and number of children. We find a shocking disparity in this regard. In 1887 81 districts having 1,350 children had no school; seven others, having 137 children, had school less than three months; 136 others, having 2,493 children, had school three months; 128 others, having 2,326 children, had school four months; 222 others, having 7,415 children, had school five months. Thus we see that in 637 districts, more than nine per cent. of the whole number, having 13,721 children, more than two and a quarter per cent. of the whole number, some districts maintained no school, and no one of them for more than five months. What a forcible commentary on the educational spirit, the intelligent patriotism and loyalty to republican institutions, on the part of the parents and school officers in these 637 independent and sovereign districts, do these facts constitute!

Now, shall any man or any class or society of men say to us: The State must not disturb the autonomy of these districts! Shall they declare before the intelligent people of Michigan that this crime against the children must still be perpetrated! Away with such nonsense—views that might find some excuse in a darker age, but should find none to-day in Michigan. We may make and enforce laws for the prevention of cruelty to dumb beasts, but men may hold their own children bound in the shackles of ignorance and the State may not interfere. This doctrine may find followers in the fool's paradise or the limbo of anarchism, but it must not in Michigan.

Sixteen of the northern States, and among them Michigan, have enacted laws making attendance of children between certain ages compulsory; but what the result is in Michigan we have seen. The State undertakes to compel parents to send their children to school, but it does not compel them to open a school. It fixes an unreasonably low minimum limit for the length of school required to entitle a district to public money from the State. Hence, if the children have any rights to the privileges of education in which the State is bound to protect them, either it does not, or it grants them protection very unequally.

Nothing is more repugnant to my feelings than to unjustly and unfairly characterize the teachers in the weaker districts. They are not to be blamed. Those in the non-progressive districts are entitled to our fraternal sympathy. They are victims to circumstances that bind them with shackles and paralyze their energies. Some of them, nevertheless, do excellent service. Many more would become efficient teachers if they held close relation to a competent superintendent, whose duty it should be to direct and instruct them in their work. But this can never be effected under the present system, with small and independent districts. A multitude of others have insufficient acquirements and mental culture, hardly any knowledge of school organization, and of the principles and proper methods of instruction, and these should not be permitted to teach. It is incomparably more important that the children of the State shall be well taught, than that a few young people, who ought to be enrolled as pupils, shall be permitted, as teachers, to experiment aimlessly, while the children lose the advantages that efficient instruction would give.

But I hear some one asking: "Has not Michigan a State Normal School?" She has, just one, and she granted it, in 1887, from her general fund, \$38,178 for its regular annual support, while little Massachusetts has six, and granted them, the same year, \$86,225.72; Pennsylvania has eleven; New York has nine, besides that in New York city, and is now building her tenth. Last year she granted for the support of her normal schools \$258,966.23. She also gave from her State treasury, for the support of teachers' classes in academies, \$35,524, and for teachers' institutes, \$18,555.54, making a total, of \$331,045.77. Furthermore, she granted from her State treasury specifically for school supervision and superintendency, \$173,283.04. Thus she gave in one year, directly from her State treasury, for the normal schools and the instruction and supervision of her teachers, \$486,328.81—almost half a million dollars. Massachusetts and New York devote a large per cent. of their school moneys to the preparation of teachers and an efficient supervision of the public schools, wisely directing their appropriations in such manner as to insure their improvement.

I am aware that comparisons are sometimes invidious. Therefore, I will add, that Michigan has contributed nobly and generously for the maintenance of her charitable institutions. But my sense of justice compels me to ask: What shall she now do for over 600,000 children of school age, almost a quarter of a million of whom are under ten years of age? They look to her for protection in their rights, and for some sufficient guaranty of the privileges of an education.

In the first place the State should change her system of local, district management and taxation, and employment of teachers, to what is called the township system, and should provide therein for a thorough and efficient organization of the schools of each town as a system. This plan should provide for an efficient and constant supervision of the schools of each town, the instruction and direction of the teachers by a superintendent, who, subject to the town board, and a county or State superintendent, should be held responsible for the work done. The schools should be graded, and a course of study adopted suited to the circumstances. Monthly town teachers' institutes should be provided for and made imperative, and all teachers should be required to attend them. Under such circumstances the best and most experienced teachers would, as superintendents, be officially charged with the

instruction and direction of those less thoroughly prepared for their work by education and experience. *They* would set up and maintain a higher standard of requirement. They would impress themselves strongly on the teachers and pupils, and would thus determine the ruling spirit in the schools. This system would bring the best teachers to the front, and give them prominent positions, and thus would multiply their influence on public education. Competent, ambitious and faithful teachers of less experience, but having natural aptitude and a love for teaching, would thus be helped to rise in the profession. The lazy and incompetent, and those lacking the aptitude, the courage and spirit of the true teacher, would inevitably lose their present vocation. The number of teachers would be diminished, but the profession would gain immensely in the public esteem, and the spirit ruling in the schools would enter the homes of the children and act as a healthy tonic on the views and purposes of parents.

Our present system is a mere rope of sand, having no effect to bind the schools together by organization. It is not adapted to any method of supervision that can accomplish much for improvement. Herein lies its fatal defect. It is the unanimous opinion of all leading and experienced educators that the primary and indispensable prerequisite for good schools, is a system of effective supervision, one under which the teachers and schools are constantly under the direction of the superintendent. He is the architect for the schools, and gives them form. He is general in chief. He instructs and drills the teachers as his subordinate officers. They move at his command. The battle against ignorance, vice and indolence is fought according to his plan of campaign. If he is able and active, victory will be won.

The township system offers the best conditions yet found for an effective superintendency of the rural district schools. This system would benefit most those districts weakest in financial resources, giving them educational advantages proximately equal to those enjoyed by the larger and stronger districts. It would give all the children of a town school privileges for the same number of weeks. The strong would help in carrying the weak.

Do I hear some despondent, faint-hearted teacher say: "This would be a consummation devoutly to be wished; but we cannot hope ever to reach it?" Not so. If this end ought to be gained it will be gained if we entertain a proper purpose in view of our obligation, and have the necessary courage in working for the good cause.

What, then, does Michigan owe her children? It is a fundamental principle in republican governments that the welfare and perpetuity of the State can be secured only by the intelligence and virtue of the people. Hence the Northern States have long recognized, and declared it before the world, as their first duty to guarantee their children the benefits of a common school education. It follows that such an education is the birthright of every American child. If so, then the State must, if necessary, use compulsory means to open public schools every year for all children, for a period commensurate to the end in view, and must enforce attendance.

It is this principle that justifies and dignifies the State when it declares that the property of the State must educate the children of the State, and levies a tax on every dollar of taxable property for this high purpose. But the State has no proper right to take your property and mine and squander it, by attempting to educate under a scheme that precludes the possibility of any success proportionate to the money expended. It must do whatever it

is expedient to do in order to attain the end. Therefore, since the end cannot be attained without effective supervision, it is not only the right, but it is the imperative duty, of the State to incorporate a plan for thorough supervision of all public schools as an organic part of its system of education. It follows that the State must either adopt the township system or some other that goes still farther in the same direction, since otherwise nothing worthy the name of supervision is possible.

If, now, the State is charged with this education, and the property of citizens having no children of their own to educate, must pay a school tax, it would seem to be axiomatic that the tax should be so laid as to press equally upon the property of all. Hence the tax must, so far as possible, be a State tax, and be uniform throughout the State. But under the present system of school district taxation, nearly three-fourths of the entire amount is raised in the districts. Only a little over one-fourth is so raised that all the property in the State contributes in equal proportion. The present system of district taxation is exceedingly unjust, since, under its operation, the property owners of some districts are required to pay a tax at a rate three or four times as high as that laid upon those of other stronger districts. The township system would tend toward equalization of taxes, and hence would prove a long step in the right direction. But this would not go far enough. The State school tax should be considerably increased. It is now one mill on the dollar. Some ten years ago it was two mills on the dollar, but was reduced to one mill. I dare not risk myself to characterize such action. In Indiana it is one mill and six-tenths. This increase would inure greatly to the benefit of the rural districts, and would have a strong tendency to gain for the new legislation, including the township system, thousands of friends where they are most needed. These people are not slow to see any pecuniary advantage. At nearly the same time, and when the people were not expecting it, the State of New York greatly increased the salaries of her school commissioners or superintendents in the entire State, established five new normal schools, abolished the odious rate-bill, thus making the schools free, and increased her State school tax; and all the people said "Amen!" No more popular move was ever made by a legislature. The rural districts at once saw their advantage.

Let us examine, for a moment, to see how a State school tax works. The property of a State tends toward the cities or business centers. Under these circumstances the property in large cities forms a larger per cent. of all the property of the State than the number of children in such cities forms of the whole number in the State. Now, when we apportion the proceeds of this tax according to the number of children, the small towns and rural districts receive considerably more money than they pay in taxes. In 1887 New York State took over \$1,650,000 out of New York city by her State school tax, paid back to the city \$622,000 of it, and took the balance, over a round million of dollars, and scattered it over the rural districts, to educate the children of the State. This was a wise, paternal act. I was present in the legislature when the increase of the State tax was under discussion, and when the vote was taken. The members from New York city stated what the effect of the law would be on them, and said it was just, and that they should vote for it. They did so vote. A single member, from a rural constituency, was so stupid as to vote against it. Let his fate stand as a warning to all legislators of like views. He never graced the capitol again.

What is the most important duty the coming legislature of Michigan may perform? It is:

- 1st. To fix six months as the minimum length of school during the year;
- 2d. To enact a law adopting the township system for public schools, incorporating therein a definite, compulsory provision for thorough supervision;
- 3d. To increase the means for the preparation of teachers; and,
- 4th. To increase the State school tax.

DISCUSSION.

PROF. B. A. HINSDALE said:—I take it for granted that there is no difference of opinion, so far as those present are concerned, as to the importance of the subject that has been discussed. It is undoubtedly one of those educational questions that are attracting a large measure of attention at the present time. Neither, in the second place, do I suppose there is any difference of opinion as to the value and interest of the full, vigorous, and incisive presentation of the principal features of the subject that Prof. Barr has made in his paper. He has presented the main points of the argument with conciseness and strength, and I do not feel that it would be proper for me, at this stage of the session, to talk very long. However, there are two or three phases of the subject that, perhaps, I may be able to state in such a way as to enlarge somewhat the range of the discussion.

In the first place, then, there are in the United States two generically different ideas or systems of local organization for political purposes. We have the town system of New England, and the county system of the Southern States. Local government in New England is carried on almost exclusively by means of the town, or township as we should say in the West; the county exists, but it is scarcely a political unit. In the South the town is almost unknown; in some States it is wholly unknown; those divisions of land six miles square that have been run out by the government surveyors have never received names; they are known simply by their numbers; and are not units of political organization for any purpose whatever. The county is everything, the township nothing. In the old Middle States we find the compromise system, which makes less of the town than New England makes of it, and more of the county; it makes less of the county than the South makes of it, and more of the town. And it is the compromise system of the old Middle States that has extended itself over the West. I speak in general terms, and have not time for the qualifications and explanations that would be necessary if I were going very thoroughly into the matter.

So far as I know, wherever the town exists in any vigorous political sense, it is a factor larger or smaller in educational matters. Some of the States have adopted the town or township system as the educational unit, and they work from that basis. Other States have divided the township into districts, and use the district as the basis of operations. That is the unit of organization so far as common school education is concerned. It is understood, as a matter of course, that in Michigan the local school unit is the district and not the township. The great question is, which one of these two methods is the better?

From two points of view, the subject has been investigated. The first is the theoretical or philosophical view, and, so far as I know, all who have looked at the question in that way, think the township is the proper unit and that the district system is a mistake. The vast majority of those who have looked into the matter as a question of political philosophy, have come to the conclusion that the town system is a better one.

But, in the second place, we have had these two methods tested by experience for long periods of time. Some of the States have tried both of them; and the men in those States who are most competent to judge, strongly favor the town system. They argue from educational experience.

It is a significant fact that the political theory upon which the district school organizations depends, is a theory which has been almost universally abandoned for all other purposes whatsoever. We all know that there is no line of political or social development along which the English race has made more progress than along the line of local political organization. It is one of the glories of the English race, admitted to be such by all competent authorities. We know, in the second place, that the old Saxon theory of carrying on government was democratical. The people met in public assembly, and there they voted, in their way, some questions up and some questions down. But democratic government was found not to work well, and representative government was set up in its place. In New England the democratic system of local government prevails to a considerable extent, but in its extreme form it has been abolished. It cannot meet with good results, for the reason that in its extreme form it was found too complicated. The representation principle is the one that prevails in school matters where the township system exists. The people have the ballot box, and elect men whose business it is to administer town government. But, for some reason, the American people have clung more closely to the antiquated method of carrying forward local government in education than anywhere else. They have clung, in many of the States, to the ancient democratical idea, and shunned the representative idea. The district system is very dear to the hearts of very many people, as Prof. Barr intimated. But anyone who will inquire into the facts, can hardly avoid coming to the conclusion that, upon the face of it, it is an absurdity.

In every district in Ohio, for example, there are three school directors. The township clerk has certain educational duties to perform, and so have the county auditor and treasurer, and the county board of examiners. And I remember that, some years ago, there were engaged 40,000 persons in administering the public schools of Ohio. Nor does this number include the teachers. About that time there were required to man the schools 13,000 teachers. You put these two numbers in ratio, and it will appear, that, for every teacher employed, there were three and one-third directors, inspectors, supervisors, or call them what you will; and they did not do the duties for which they were elected. They did hire the teachers, but so far as inspection or supervision was concerned, the cases were exceedingly rare where anything of that kind was done at all. It was the natural course of things. What is left to so many hands to do, is not, as a matter of fact, done at all. Power is divided and responsibility is destroyed.

A plausible argument in behalf of the district system is, that the schools are very near to the hearts of the people, as is shown by the fact that they have retained the ancient democratic idea in school management more fully than in anything else. Then it will be argued that this shows proper interest, and that the school will be more properly administered by people who are near the school and interested in it, than by those at a distance. But all the analogies bearing on the question point to the foolishness of this conclusion.

I do not know how it is in Michigan, but in the State of Ohio the township is divided into road districts, and the keeping up of the public roads is committed to a supervisor, and the people are required to work out their taxes under the law. I have worked on the road many a day, and I want to say, of all the shiftless and inefficient work with

which I ever had anything to do, the most shiftless was that done on the country roads. My father was often supervisor, and I well remember occasions when there were heart-burnings between him and his neighbors because he insisted that the road work should be well done, while they were determined to slight the work as they had always done. And yet it is hard to think of a public interest lying nearer a farmer's door that more concerns his comfort and convenience than the country road. Antecedently, we would expect the people would take an interest in keeping the roads in prime condition, but they do nothing of the kind.

I see the time assigned me is up, but I wish to close with saying just this one thing, that the district system of conducting common schools rests upon an idea, and proceeds by means of an organization, that has not been preserved by English-speaking people for any other purpose, save for the one to which I have just made reference—the roads. And it would be hard to say which are the worse managed—the schools or the roads.

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SIXTH ANNUAL REPORT
OF THE
BUREAU OF LABOR
AND
INDUSTRIAL STATISTICS.

FEBRUARY 1, 1889.

BY AUTHORITY.

LANSING:
THORP & GODFREY, STATE PRINTERS AND BINDERS.
1888.

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LETTER OF TRANSMITTAL.

STATE OF MICHIGAN,
BUREAU OF LABOR AND INDUSTRIAL STATISTICS, }
Lansing, February 1, 1889.

HON. CYRUS G. LUCE, *Governor of Michigan* :

DEAR SIR:—In compliance with Section two, Act No. 156, Public Acts of Michigan, of 1883, I have the honor to transmit herewith the Sixth Annual report of this Bureau.

Very respectfully,

A. H. HEATH,

Commissioner of Labor.

INTRODUCTORY.

The work of the Bureau of Labor and Industrial Statistics for the year 1888 has been confined to an investigation of the wages and social condition of the men who are employed in, and produce wealth from the fire clay banks, slate, building stone and grindstone quarries, coal deposits, gypsum beds and the great copper mines of our State. It was deemed of more value to make a canvass of a few industries and do the work thoroughly and systematically than to spread the work over many occupations and only obtain partial reports. In order to secure reliable information competent men were employed to make a special canvass of each industry, who obtained the replies to the questions on our blanks from the miners and laborers themselves in personal interviews.

The report is divided into ten parts. Part I is devoted to the Statistics of the Fire Clay Industry; Part II to the Statistics of the Slate Industry; Part III to the Statistics of the Coal Industry; Part IV to the Statistics of the Grindstone Industry; Part V to the Statistics of the Gypsum Industry; Part VI to the Statistics of the Building Stone Industry; Part VII to the Statistics of the Copper Industry. In each industry the following information has been obtained: Age of the workmen; nativity; nativity of parents; how long in the United States, if foreign born; married or single; if married how many children in the family; how many depend upon him for support; how many years at present occupation; how long with present employer; number of months employed during the year; how many hours for a day's work; wages received; annual earnings; whether paid cash or trade; how often paid; amount saved during the year; how do wages compare with former years in this country; his occupation in the old country, if foreign born; wages received in the old country; how many hours for a day's work in the old country; amount of money at interest or deposited in the bank; if foreign born, how much money did he possess on arrival in this country; if owning home, its value; if mortgaged, amount of mortgage; rate of interest; are you

as well off as five years ago; loss of time during the year and the causes; if renting home, monthly rental; if boarding, cost per week, including room; is life insured, and for how much; do you belong to a benefit society; weekly benefit in case of sickness or accident; have you a sewing machine; have you an organ or piano; do you take a daily, weekly or monthly newspaper; age began work; state of health then and now; amount of relief rendered friends in the old country; amount of money furnished to friends for passage to the United States.

The individual replies to each of the above questions are published just as answered, in Tables No. 1, 2, 3, 4, 5, 6 and 7, which correspond to Parts I, II, III, IV, V, VI and VII. Preceding each table is a written summary of the statistical information contained in the table, which will be of great value to those persons who do not care to give time to the study of the individual returns. This summary is compiled by industries and comprises individual replies from the following: The Fire Clay Industry, 54 employés; the Slate Industry, 20; the Coal Industry, 69; the Grindstone Industry, 124; the Gypsum Industry, 193; the Stone Industry, 259; the Copper Industry, 3,070; making a total of 3,789 employés canvassed. In the Copper Industry only 2,497 of the individual returns are printed, as the blanks on which 573 of the returns were made omitted four questions, the most important one being the statement of wages received in the old country. In the Copper Industry the returns would indicate that the native born workmen do not receive as large wages as the foreign born. This apparent disparity will be explained by consulting the age column. Almost the entire labor in the copper mines is foreign. The few recorded as Americans are the sons of foreigners, who are old enough to begin work in or about the mines, and to earn their own living, but who have not, as yet, had the experience necessary to command full wages.

Part VIII contains a summary by nationalities of the information embodied in Tables No. 1, 2, 3, 4, 5, 6 and 7. Table No. 8 is a summary of the Fire Clay, Slate, Coal, Grindstone, Gypsum and Building Stone Industries, and Table No. 9 of the Copper Industry. These tables show the thrift and social condition of the different nationalities, embodied in the following information: Average years in the United States; number married and single; average hours for a day's work in the old country; average wages paid per month in the old country; average number of hours for a day's work in this country; average wages paid per month in this country; total amount of money on arrival in this country; number having money on hand or in the bank; total amount of money on hand or in the bank; number who refused to answer the above question; number who have homes; amount invested in

homes; number who have sent money to friends in the old country; amount sent to friends in the old country; number renting homes; average monthly rental; number boarding; average cost per week for board, including room; number having life insurance; amount of life insurance; number belonging to benefit societies; average weekly benefit in case of sickness or accident; number having sewing machines; number taking newspapers.

Part IX is a comparison by nationalities of the wages received in the old country with the wages received in Michigan, and includes Table No. 10 to Table No. 24, inclusive. Many of the employés did not give the amount of wages received in the old country, or the occupation followed. All who answered these questions, making a comparison possible, have been recorded in the tables. The amount of wages received both in the old country and in Michigan was obtained by our canvassers from the men themselves, and the recorded answers are their own. As nearly all the labor employed in the industries treated upon in this report is foreign born, it has afforded the right opportunity to make a reliable comparison of wages. It is an invaluable compilation, well worth the time given to its examination.

Part X is the proceedings of the Sixth National Convention of the Bureaus of Statistics of Labor in the United States, held in Indianapolis, Ind., May 22 and 23, 1888.

We are under obligations to Hon. C. D. Lawton, Commissioner of Mineral Statistics, for the geological and mineralogical information contained in this report.

PART I.

STATISTICS

OF THE

FIRE CLAY INDUSTRY.

THE FIRE CLAY INDUSTRY.

In every section of the state there is an abundance of excellent clay, which is utilized for brick-making. There are 234 brick kilns in Michigan. In Jackson county there is an inexhaustible supply of superior fire clay, suitable for the manufacture of the best quality of fire bricks, drain tile, sewer pipe, paving brick, meat tubs, chimney flues and tops. The Commissioner of Mineral Statistics says that "the clay found in Jackson county is likely to be of greater value than the coal. It already forms the basis of large manufacturing enterprises, and the supply of clay, suitable for nearly all purposes, is practically inexhaustible."

At Grand Ledge there is also a superior quality of fire clay, but as yet it is not used for manufacturing purposes. The Jackson clay is obtained two miles north of the city, in Blackman township, and in Spring Arbor township four miles southwest. An extensive business is carried on by the Jackson Fire Clay, Sewer Pipe and Tile Co., and the Bennett Sewer Pipe Co. The former employs 60 men, has been in operation 21 years, and has \$80,000 capital invested. For the year ending December 31, 1887, 10,000 tons of manufactured goods were produced, worth \$75,000. Aggregate wages paid during the year, \$30,000; expenses other than labor, \$14,400.

The Bennett Co. employs 75 men, has been in operation 7 years, and has a capital of \$100,000. For the year ending December 31, 1887, 21,000 tons of manufactured goods were produced, worth \$100,000. Aggregate wages paid during the year, \$41,000; expenses other than labor, \$14,019.68.

The men are paid cash every week by the Bennett Company, and every two weeks by the Jackson Company, and trade where they choose. They are just as independent as those in other manufacturing institutions. In the two works a canvass of 54 men was secured, from which we make the following summary:

The nationalities are: Three Irishmen, 17 Americans, 1 Polander, 10 Englishmen, 20 Germans, 1 Canadian, 1 Scotchman and 1 Russian. Of

those born in the United States 12 are of American parentage, 2 English, and one French, German and Danish. The occupations are: Twenty-one laborers, 3 engineers, 2 clay moulders, 2 bricklayers and 1 fireman, kiln setter, worker of clay press, brickmaker and potter. Wages per day: Bricklayers, one \$1.50 and one \$1.75; fireman, \$1.75; kiln setter, \$1.75; clay moulder, one \$1.50, and one \$2.00; worker of clay press, \$1.50; brickmaker, \$1.25; potter, \$1.75; engineers, one \$2.00, one \$2.25, and one \$2.33; laborers, one 50 cents; two 60 cents; two \$1.10; twenty-eight \$1.25; one \$1.32; one \$1.35; one \$1.40; four \$1.50; one \$1.80; one \$2.00. Nationalities by occupation: Bricklayers, 1 Irishman, 1 Englishman; the brickmaker, English; the potter, German; clay moulders, 1 Englishman, 1 American; engineers, 1 Englishman, 1 Canadian, 1 American; the fireman, Irish; the kiln setter, American; the clay presser, American; laborers, 1 Polander, 1 Russian, 1 Scotchman, 1 Irishman, 6 Englishmen, 11 Americans, 21 Germans. Forty-two of the men are married and 12 are single. Five of the men have no children and 37 have children. Of the married men having no children 3 are Americans, 1 German and 1 English. Three have 1 child each, eleven 2, nine 3, five 4, five 5, six 2, one 8 and one 9, a total of 126. Twenty-six are children of Americans and 100 of foreigners. Fifty-three attend school; 104 of the children depend upon their parents for support. Eight of the men work 12 hours a day and forty-six 10 hours. Number of years at the present occupation of those having trades: One 2 years, three 6, two 9, one 10, two 12, one 17, one 25, one 35. Time in the employ of the present companies, from three weeks to 17 years. Number of months employed during the year: One man 6 months, one 9, five 10, one 11 and forty-six 12. Loss of time from sickness: One man 13 days, one 26 days, one 52 days. Loss of time from inability to obtain work: Two 26 days, one 52, one 156. Loss of time from causes not stated: Two 26 days, one 52 days, one 65 days. Ages of the men: One 15, three 18, one 19, three 20, one 24, two 26, three 27, five 28, four 30, one 31, two 32, three 33, one 34, one 35, three 36, one 37, two 38, two 39, one 41, two 43, two 46, one 47, three 49, one 50, one 51, one 52, one 55 and two 56. Began work at the following ages: One at 8 years, five at 10, two 11, six 12, five 13, eight 14, eleven 15, eleven 16, one 17, one 18, two 19 and one 20. The number of years the foreign born have been in the United States: One 3 years, two 4, five 5, four 6, four 7, five 8, one 10, one 12, one 13, three 14, one 17, one 18, one 19, two 20, one 26, one 23, one 33, one 34, one 36. Occupation in the old country: One each of the following: Brickmaker, clay moulder, fisherman, slate maker, blacksmith, carriage maker, butcher, and one not answered; 2 stone cutters, 3 miners, 3 laborers, 11 farmers. Wages received in the old country: Six did not an-

swer, one 40 cents a day, two 48 cents, one 50 cents one 72 cents, one 75 cents, one \$1.25, one \$1.35, one \$1.75, one \$1.50; per week, one \$2.00, one \$2.40, one \$3.65, one \$5.00, one \$6.84; a month, one \$23, one \$35; a year, two \$36.50, one \$50 and one \$75. Earnings for the year: Two earned \$187 each, two \$343, two \$540, two \$624, three \$546, four \$325, four \$468 and one each the following sums: \$156, \$357, \$393, \$421, \$436, \$475, \$620, \$640, \$650, \$702, \$726; twenty-one \$390 each. Total earnings, \$23,564; average per man, \$436.37. The children in 3 families earned a total sum of \$1,080, as follows: One family of children, \$200, one \$380, one \$500. None of the wives earned any money. Four sent money for the support of relatives in the old country. One sent \$25, one \$50, one \$60, one \$500; total \$635. Two sent money to pay passage of relatives to this country: One \$15, one \$25. Fifteen saved money during the year: One \$56, one \$80, one \$150, three \$50, three \$200, six \$100, total \$1,636. Three have money at interest: One \$200, one \$600, one \$2,000, total \$2,800. Thirty-two own homes valued at: One each \$200, \$250, \$350, \$450, \$700, \$2,000, \$2,500, two \$300, two \$550, two \$600, two \$650, two \$1,500, three \$800, five \$1,000, six \$500, total invested in homes, \$19,950. Thirteen of the 32 home owners are mortgaged: One each for \$150, \$250, \$350, \$360, \$400, \$550, two for \$70, two \$100, three \$300, total \$3,280. One pays 6 per cent interest, two 8 per cent and ten 7 per cent. Thirteen pay rent: One \$3 per month, three \$4, two \$4.50, two \$5, two \$6, one \$7, one \$7 50, one \$8. Those boarding do not all report price of board. Two pay \$3 per week, four \$3.50 and one \$4. Ten of the foreigners had money upon arrival in this country and 37 had nothing. One had \$30, one \$34, one \$50, one \$100, two \$200, one \$250, two \$300, one \$400, total \$1,864. Forty-four said that they were as well off as five years ago, 9 said that they were not, and one did not reply. The reasons why the 9 were not as well off were: One, more in debt, 2 less work, 2 less wages, 4 less money. To the question, how do wages compare with previous years in this country? Two replied better, 7 not answered, 17 not as good, 28 about the same. All had good health when they commenced work. Present state of health: Forty-seven good, 3 fair, and 4 not good. One has a life insurance of \$1,500, one \$2,000 and two \$1,000 each, total \$5,500. One said that his life was insured but did not state the amount. Thirteen belong to a benefit society, and receive in case of sickness or accident: Three \$3 per week and ten \$4 per week. Two own pianos, one an organ, and 30 own sewing machines. Six take a monthly magazine, 25 a weekly and 14 a daily paper.

LABOR AND INDUSTRIAL STATISTICS.

TABLE NO. 1.—Statistics of the Fire Clay Industry.

Occupation.	Line number.	Age.	Nativity.	Nativity of parents.	How long in U. S., if foreign born.—(Years.)	Married or single.	How many children in family.	How many attend school.	How many depend on you for support.	How many years at present occupation.	How long with present employer.—(Years.)	Number of months employed during year.	How many hours for a day's work.	Wages paid.	Annual earnings.	Are you paid cash or trade.	How often are you paid.	Amount saved during the year.	How do wages compare with former years in this country.	What occupation did you follow in the old country.	Wages received in the old country.
Bricklayer.....	1	16	Ireland.....	Ireland.....	18	m	8	4	6	2	2 yrs	12	10	\$1 75	\$546 00	c	s m	.....	not so good	not ans'w'd	not answered
Fireman at kiln.....	2	43	"	"	28	m	6	5	7	10	5 "	12	12	1 75	+ 620 00	c	s m	.....	not so good	"	"
Kiln setter.....	3	35	U. S.....	U. S.....	.....	m	.....	.....	1	6	6 "	12	10	1 75	546 00	c	s m	\$200	same	.....	.....
Clay molder.....	4	30	U. S.....	France.....	.....	m	3	2	4	6	10 "	12	10	1 50	468 00	c	s m	50	about same	.....	.....
Runs clay press.....	5	51	U. S.....	U. S.....	.....	m	2	1	2	9	15 "	12	10	1 50	468 00	c	s m	.....	about same	.....	.....
Laborer.....	6	11	Poland.....	Poland.....	7	m	4	.....	5	.....	5 "	12	10	1 25	390 00	c	s m	.....	same	farmer	\$50 per year†
"	7	24	England.....	England.....	17	s	.....	.....	.....	.....	2 "	12	10	1 25	390 00	c	s m	100	same	.....	.....
"	8	18	"	"	14	s	.....	.....	.....	4	1 "	12	10	1 60	187 20	c	s m	.....	not ans'w'd	.....	.....
"	9	17	"	"	23	m	.....	.....	1	.....	8 "	12	10	1 25	390 00	c	s m	.....	not so good	.....	.....
"	10	49	"	"	14	m	2	1	2	.....	3 "	12	10	1 25	390 00	c	s m	100	poorer	laborer	\$2 40 per week
"	11	18	U. S.....	"	.....	s	.....	.....	.....	2	2 "	12	10	1 10	343 20	c	s m	.....	not ans'w'd	.....	.....
"	12	12	Germany.....	Germany.....	6	m	.....	.....	1	.....	5 "	11	10	1 25	357 50	c	s m	50	not so good	butcher	2 00 per week†
"	13	12	"	"	6	m	9	4	5	.....	6 "	12	10	1 25	390 00	c	s m	.....	not so good	farmer	48 per day
"	14	16	"	"	13	m	2	1	8	12	12 "	9	10	1 25	292 50	c	s m	.....	about same	stone cutter	8 63 per week
"	15	32	"	"	12	m	4	.....	6	12	4 "	12	10	1 25	390 00	c	s m	.....	about same	farmer	36 50 per year†
"	16	30	Russia.....	Russia.....	6	m	2	.....	8	5	4 "	12	10	1 25	390 00	c	s m	100	same	farmer	w'k'd at home
"	17	50	U. S.....	U. S.....	.....	m	3	.....	1	10	10 "	12	12	1 32	+ 476 00	c	s m	150	not so good	.....	.....
"	18	30	"	"	.....	m	.....	.....	1	.....	4 "	12	12	1 10	343 20	c	s m	.....	not ans'w'd	.....	.....
"	19	12	"	Germany.....	.....	m	1	.....	2	.....	7 "	12	10	1 25	390 00	c	s m	.....	same	.....	.....
"	20	30	"	U. S.....	.....	m	.....	.....	1	.....	6 wks	10	10	1 25	325 00	c	s m	.....	same	.....	.....
"	21	49	"	"	.....	m	3	1	2	.....	17 yrs	12	10	1 40	436 80	c	s m	.....	a little bet'r	.....	.....
"	22	15	"	Denmark.....	.....	s	.....	.....	.....	.....	15 mo	12	10	1 50	156 00	c	s m	.....	not ans'w'd	.....	.....
"	23	20	"	England.....	.....	s	.....	.....	.....	7	7 yrs	12	10	1 25	390 00	c	s m	.....	better	.....	.....
"	24	31	"	U. S.....	.....	s	3	.....	4	.....	2 mo	10	10	1 25	325 00	c	s m	.....	poorer	.....	.....
"	25	30	"	"	.....	s	4	.....	.....	1	1 yr	12	10	1 25	390 00	c	s m	.....	not ans'w'd	.....	.....
"	26	33	"	"	.....	m	4	2	5	.....	7 "	12	10	1 25	390 00	c	s m	.....	not so good	.....	.....
Engineer.....	27	34	Canada.....	"	8	m	5	3	6	12	4 "	12	12	2 33	736 96	c	s m	200	about same	engineer	1 35 per day
Brickmaker.....	28	19	U. S.....	"	.....	m	5	2	8	35	3 "	10	10	1 25	325 00	c	w'y	.....	not so good	.....	.....
Bricklayer.....	29	35	England.....	England.....	33	s	.....	.....	.....	25	8 wks	6	10	1 50	+ 275 00	c	w'y	.....	poorer	brick mak'g	48 per day
Potter.....	30	39	Germany.....	Germany.....	84	m	2	2	3	17	5 yrs	12	10	1 75	546 00	c	w'y	50	not so good	.....	.....
Clay molder.....	31	28	England.....	England.....	6	s	.....	.....	.....	9	5 "	10	10	2 00	+ 624 00	c	w'y	.....	the same	clay molder	1 75 per day
Engineer.....	32	26	"	"	8	m	3	.....	4	6	2 "	12	10	2 00	+ 640 00	c	w'y	56	same	farmer	1 50 per w'k†

LABOR AND INDUSTRIAL STATISTICS.

TABLE No. 1.—Continued.

Occupation.	Line number.	How many hours for a day's work in the old country.	Amount of money at interest or in the bank.	If foreign born, how much money did you have on arrival in U. S.	Do you own your home. If so, its value.	If mortgaged, amount of mortgage.	Rate of interest.	Are you as well off as five years ago.	Loss of time.			If renting home, monthly rental.	If boarding, cost per week, including room.	Life insurance, how much.	Do you belong to a benefit society.	Weekly benefit in case of sickness or accident.	Have you a sewing machine.	Have you a piano.	Have you an organ.	Do you take a newspaper.			Age began work.	State of health then.	State of health now.	Amount of relief rendered friends in the old country.	Amount of money furnished to friends for passage to U. S.
									From sickness.—	(Days.)	Inability to obtain work.—(Days.)									Causes not stated.	(Days.)						
																						Daily.						Weekly.	Monthly.
Bricklayer	1	10			\$1,000			yes							no	yes	yes	no	no	no	no	14	good	fair			
Fireman at kiln	2				500	\$400	7	no									no	no	no	no	no	15	good	good			
Kiln setter	3		\$800		no			yes									no	no	no	no	no	17	not good	not good			
Clay molder	4				300												yes	no	no	no	no	15	good	good			
Runs clay press	5				2,000													no	no	no	no	18	fair	fair			
Laborer	6	10			300													no	no	no	no	15	good	good	\$15 00		
"	7				250													no	no	no	no	10	"	"			
"	8				no												yes	no	no	no	no	14	"	"			
"	9	10			"													no	no	no	no	20	"	"			
"	10				"													no	no	no	no	10	"	"			
"	11				"													no	no	no	no	16	"	"			
"	12	10			650	250	7										no	no	no	no	no	15	"	"			
"	13	12		\$300	no			no									yes	no	no	no	no	13	"	not good			
"	14	12		400	1,000			yes						\$1,500				no	no	no	no	13	"	good			
"	15	11		250	no													no	no	no	no	16	"	good			
"	16	11		200	550													no	no	no	no	12	"	"			
"	17		2,000		800												yes	no	no	yes	yes	15	"	"			
"	18				no												no	no	no	no	no	15	"	"			
"	19				500	70	7							1,000			yes	no	no	yes	no	8	"	"			
"	20				no													no	no	no	no	15	"	"			
"	21				1,000													no	no	no	yes	15	"	"			
"	22				no													no	no	no	no	14	"	"			
"	23				"													no	no	no	yes	12	"	"			
"	24				"													no	no	no	no	10	"	"			
"	25				"													no	no	no	no	19	"	"			
"	26				800	300	7										yes	no	no	no	no	16	"	"			
Engineer	27	11			1,000													no	no	yes	yes	13	"	not good			
Brickmaker	28				1,500													no	no	yes	no	12	"	good			
Bricklayer	29	14			no			no									no	no	no	no	yes	14	"	fair	\$50 00		
Potter	30				1,700			yes										no	no	no	no	14	"	good			
Clay molder	31	10		100	no													no	no	no	no	14	"	not good			
Engineer	32	12																no	no	yes	yes	12	"	good			

SIXTH ANNUAL REPORT.

9

[illegible]

PART II.

STATISTICS

OF THE

SLATE INDUSTRY.

THE SLATE INDUSTRY.

“ The slate formation of Baraga county comprises a wide belt, and extends from the Huron mountains west for many miles through Baraga county. At Huron Bay, and in the vicinity of L'Anse, an excellent quality of merchantable slate is found in abundance, which has been examined and tested by experienced slate men, quarry men, architects and builders, etc., who universally pronounce it to be fully equal to any slate produced for nearly all purposes for which this rock is used. Companies were organized to manufacture roofing slate as early as 1872. There is not the least doubt but that slate suitable for commercial purposes exist in practically inexhaustible quantities in Baraga county. This county has in slate deposits the basis of a great industry. There is no question regarding the quality of the material ; the slate is generally of a jet black color, or a very dark blue black, but there are also lighter shades. It is fine grained, with smooth surface, free from pyrites or other deleterious minerals, and has the most perfect cleavage. The quarries would be within a short distance of Lake Superior, thus giving cheap transportation.

“ There are other points in the Upper Peninsula where slate is found, but none that is at all comparable in excellence to that of Baraga county ; these are certainly of superior value, and the best grades are probably not excelled in quality by any, native or imported.

“ The slate formation is made up of beds of slate rock, which at some points are found to be beds of workable slate. The planes of stratification and the cleavage planes are usually at opposite angles, but sometimes they are in the same direction and may even very nearly conform.

“ The rock is loosened by powder blast placed in what are called the ‘ ribbons ’ in the formation and then is separated and worked out in huge blocks with wedges and picks, when it slides down into the bottom of the pit, from where it is elevated to the platform above and run to the dressing house or to the dump pile, according as it is slate or waste rock. There seems to be a great deal of waste, and immense heaps of waste rock have accumulated, derived mainly from the beds that it is found necessary to remove in order to quarry in those which are suitable for slate. There are two trimmers, the men who finally trim the edges of the sheets and shape the slates; each trimmer requires two splitters—the men who split the blocks into sheets ready for the trimmer—and each splitter requires one dresser. The latter split the block across the joints into suitable size and shape to be rendered into sheets.”—From Report of Commissioner of Mineral Statistics, 1885.

The only company now making slate is the Michigan Slate Co., who own the former lands and property of the Huron Bay Slate and Iron Co., the

Clinton Slate and Iron Co., and the Superior Slate and Mining Co., comprising 6,300 acres of land. The quarries are at Arvon, twelve miles from L'Anse, and five miles from Huron Bay, at an elevation of 500 feet above the lake. The company owns and operates a narrow gauge railroad between the quarries and the bay, where there is a shipping dock.

During 1888 the company did not work the quarries as extensively as in previous years, and only employed 25 men. The skilled work, slate making, is almost entirely done by Welshmen from the quarries of Wales. They are natural born slate makers and are employed in all the slate quarries in the United States. The company has improved machinery and all the facilities necessary for successfully operating the quarries. The slate is reached by stripping the surface. This company has substantial buildings of every description, and what is noticeable is that they are all nicely painted. There are neat, cosy dwellings for the workmen, and the most commodious and convenient boarding house in the quarry or mine districts of Michigan. It is 153 feet long and two stories high. As the quarry is 12 miles from the nearest village, the company are obliged to run a store, at which the men trade, and who are then paid their balance monthly in cash. The employes have no club or benefit society, and no provision for assistance or relief in case of accident or sickness. The company physician lives in L'Anse and makes regular visits to the location once or twice a week. The married men contribute \$1.50 and the single men \$1 per month to the company physician, and in case of sickness or accident are furnished medicine and medical attendance free. The capital stock invested, total amount of slate made during the year, aggregate wages paid, etc., the company failed to return to this bureau. Of the total number employed in the quarry our canvasser secured the information sought from 20, from which we make the following summary:

The nationalities are: Three Irishmen, six Welshmen, seven Swedes, three Americans and one Canadian French; of the three born in the United States two are of Irish parentage and one Scotch. The occupations are: One teamster, one engineer, one quarryman, two blacksmiths, five slate makers, and ten laborers. Wages per month: Teamster, \$52; quarryman, \$52; engineer, \$52; blacksmith, one \$45.50 and one \$78; slate makers, \$52; laborers, one \$28.60, five \$39, one \$45.50, two \$52. Nationality by occupation: Teamster, Canadian French; engineer, American; quarryman, Welshman; the two blacksmiths, Swede; slate makers, 1 Irishman and 4 Welshmen; laborers, 1 Welshman, 2 Irishmen, 2 Americans and 5 Swedes. Ten are married and 10 are single. Four of the married men have no children and 6 have children. One has 1 child, one 2, one 3, one 4, one 5 and one 6. None of the 21 children attend school. Ten hours is a day's work. Number

of years at present occupation, those having trades: One 2 months, one 4 years, one 6, two 7, one 12, two 40 and one 49. Time in the employ of the present company, from one month to seven years. Number of months worked during the year: One 7, one $8\frac{1}{2}$, ten $9\frac{1}{2}$, six $10\frac{1}{2}$ and one 11. Work cannot be carried on in the slate quarries in the winter season. Only one man reports loss of time from sickness—14 days. Two of the men are 24 years of age, and one each the following age: 16, 18, 19, 22, 24, 25, 27, 28, 32, 35, 36, 38, 41, 42, 48, 52, 53, 56, 58. Age at which they began work: Two at 9 years, three at 10, one at 11, four at 12, one at 13, two at 14, four at 15 and one at 19. Have been in the United States: One 1 year, one 2, one 5, four 6, one 7, one 8, one 16, two 21, one 25, one 26 and one 27 years. The occupations of the foreign born in the old country were: Five slate makers, 3 blacksmiths, 2 farmers, and one teamster, quarryman, laborer, railroading and blast furnace. In the old country the following wages were received per month: One \$13, one \$19.50, nine \$26 and one \$32.50. Hours worked in the old country: Two 10 hours, seven 11, two 12 and two 15. The total earnings of the men for the past year were: One \$200, one \$398, three \$399.75, ten \$494, one \$550.50 and one \$799.50; total earnings, \$8,087.25; average per man, \$404.36. None of the wives worked at gainful occupations outside of household duties. None have contributed to the support of friends in the old country. One sent \$58 and one \$120 to pay the passage of relatives to this country. Only one man saved anything during the year—\$100. Only one man has money at interest or in savings bank—\$500. None own homes, but rent dwellings of the company. One pays \$8 per month, one \$4.50 and seven \$4 each. The single men pay \$4.50 per week for board and room. Of those born in foreign countries 8 had nothing upon arrival in this country; one had 25 cents, two \$5 each, one \$7, one \$9, two \$10 each, one \$45 and one \$150. Seventeen said that they were as well off as five years ago, and three made no reply, although all reported wages as lower than in former years in this country. All report their present state of health as being good. None carry any life insurance, and only two belong to a benefit society, for which they receive \$4 per week when sick or disabled. Two of the families own sewing machines and two organs. The two owning organs have no sewing machines. Out of the 20 men reported, one takes a daily paper and five a weekly paper.

TABLE No. 2.—Statistics of the Slate Industry.

Occupation.	Line number.	Age.	Nativity.	Nativity of parents.	How long in U. S., if foreign born.—(Years.)	Married or single.	How many children in family.	How many attend school.	How many depend on you for support.	How many years at present occupation.	How long with present employer.—(Years.)	Number of months employed during year.	How many hours for a day's work.	Wages paid.	Annual earnings.	Are you paid cash or trade.	How often are you paid.	Amount saved during the year.	How do wages compare with former years in this country.	What occupation did you follow in the old country.	Wages received in the old country.
Slate maker	1 32	Ireland	Ireland	Ireland	6	m	...	...	1	4	4 yrs	9½	10	\$52 00	\$494 00	by the	m	...	lower	slate maker	\$26 00 per mo
"	2 58	Wales	Wales	Wales	26	m	...	...	1	49	7 yrs	9½	10	52 00	494 00	"	"	...	"	"	19 50
"	3 41	"	"	"	6	s	...	...	...	2	2 mo	9½	10	52 00	494 00	"	"	...	"	"	26 00
"	4 42	"	"	"	25	m	5	...	3	40	6 yrs	9½	10	52 00	494 00	"	"	...	"	"	26 50
"	5 56	"	"	"	25	m	5	...	...	40	5 yrs	9½	10	52 00	494 00	"	"	...	"	"	26 00
Blacksmith	6 22	Swede	Swede	Swede	7	s	...	...	...	7	1 yrs	11	10	45 50	500 50	"	"	...	"	blacksmith	26 00
"	7 28	"	"	"	7	m	...	...	...	12	7 yrs	10½	10	78 00	799 50	"	"	...	"	teaming	26 00
Teamster	8 27	Canada	Canada	France	6	m	3	...	4	4	4 yrs	9½	10	52 00	494 00	"	"	...	"	quarryman	not answered
Quarryman	9 53	Wales	Wales	Wales	27	s	...	...	...	40	6 yrs	9½	10	52 00	494 00	"	"	\$100	"	"	\$26 00 per mo
Engineer	10 35	U. S.	Scotland	Scotland	...	m	...	...	1	7	7 yrs	9½	10	52 00	494 00	"	"	...	"	"	not answered
Laborer	11 19	Wales	Wales	Wales	6	s	...	...	...	1	1 mo	1	10	28 80	28 80	"	"	...	"	laborer	not answered
"	12 24	Swede	Swede	Swede	5	s	...	...	...	5	2 yrs	10½	10	39 00	399 75	"	"	...	"	"	not answered
"	13 24	"	"	"	16	s	...	...	...	3	3 yrs	8½	10	45 50	398 12	"	"	...	"	blacksmith	\$26 00 per mo
"	14 52	"	"	"	21	s	...	...	...	4	4 yrs	9½	10	52 00	494 00	"	"	...	"	railroading	26 00
"	15 38	"	"	"	8	m	1	...	2	5	5 yrs	9½	10	52 00	494 00	"	"	...	"	"	not answered
"	16 25	"	"	"	2	m	2	...	3	2	2 yrs	10½	10	39 00	399 75	"	"	...	"	farmer	26 00
"	17 18	U. S.	Ireland	Ireland	...	s	...	...	...	3	3 yrs	10½	10	39 00	399 75	"	"	...	"	"	not answered
"	18 16	"	"	"	...	s	...	...	...	2	2 yrs	10½	10	28 60	200 20	"	"	...	"	"	not answered
"	19 48	Ireland	"	"	21	m	6	...	7	5	5 yrs	10½	10	39 00	399 75	"	"	...	"	farmer	18 00 per mo
"	20 36	"	"	"	1	m	4	...	5	1	2 yrs	10½	10	39 00	399 75	"	"	...	"	blast furn'ce	26 00

TABLE No. 2.—Continued.

Occupation.	Line number.	How many hours for a day's work in the old country.	Amount of money at interest or in the bank.	If foreign born, how much money did you have on arrival in U. S.	Do you own your home, if so, its value.	If mortgaged, amount of mortgage	Rate of interest.	Are you as well off as five years ago.	Loss of time.			From sickness.—(Days.)	Inability to obtain work.—(Days.)	Causes not stated.—(Days.)	If renting home, monthly rental.	If boarding, cost per week, including room.	Life insurance, how much.	Do you belong to a benevolent society.	Weekly benefit in case of sickness or accident.	Have you a sewing machine.	Have you a piano.	Have you an organ.	Do you take a newspaper.			Age began work.	State of health then.	State of health now.	Amount of relief rendered friends in the old country.	Amount of money furnished to friends for passage to U. S.
Slate maker	1	11	...	...	no	...	...	yes	...	...	...	...	...	65	\$4 00	...	...	no	...	no	no	no	no	no	no	12	good	...	...	...
"	2	11	...	\$10	"	...	...	"	...	...	...	...	...	65	8 00	...	...	"	...	"	"	"	"	"	"	9	"	...	...	...
"	3	11	...	...	"	...	...	"	...	...	...	...	...	65	...	\$4 50	...	"	...	"	"	"	"	"	"	12	"	...	...	...
"	4	11	...	...	"	...	...	"	...	...	...	...	...	65	...	4 50	...	yes	...	"	"	"	"	"	"	12	"	...	...	...
"	5	11	...	45	"	...	...	"	...	...	...	...	...	65	4 00	...	...	"	...	"	"	"	"	"	"	12	"	...	...	...
Blacksmith	6	15	...	5	"	...	...	"	...	...	...	...	...	27	4 00	4 50	...	yes	\$4 00	no	"	"	"	"	"	15	"	...	...	...
"	7	15	...	5	"	...	...	"	...	...	...	...	...	48	4 00	...	...	no	...	"	"	"	"	"	"	15	"	...	...	...
Teamster	8	...	...	...	"	...	...	"	...	...	...	...	...	65	4 00	...	...	no	...	"	"	"	"	"	"	12	"	...	...	...
Quarryman	9	11	\$500	...	"	...	...	"	...	...	...	...	...	65	...	4 50	...	yes	4 00	"	"	"	"	"	"	18	"	...	...	...
Engineer	10	...	...	...	"	...	...	"	...	...	...	...	...	65	...	4 50	...	no	...	"	"	"	"	"	"	14	"	...	...	...
Laborer	11	...	...	...	"	...	...	yes	...	...	...	...	...	45	...	4 50	...	"	...	"	"	"	"	"	"	19	"	...	...	...
"	12	...	...	...	"	...	...	"	...	...	...	...	...	85	...	4 50	...	"	...	"	"	"	"	"	"	10	"	...	...	...
"	13	...	...	...	"	...	...	"	...	...	...	...	...	85	...	4 50	...	"	...	"	"	"	"	"	"	20	"	...	...	...
"	14	12	...	150	"	...	...	"	...	...	...	...	...	85	...	...	...	"	...	"	"	"	"	"	"	10	"	...	...	...
"	15	10	...	7	"	...	...	"	...	...	...	...	...	85	4 50	...	...	"	...	"	"	"	"	"	"	9	"	...	...	...
"	16	12	...	...	"	...	...	"	...	...	...	...	...	31	4 00	...	...	"	...	"	"	"	"	"	"	10	"	...	...	...
"	17	"	"	45	"	...	"	"	"	"	"	"	15	"
"	18	"	"	180	"	...	"	"	"	"	"	"	14	"
"	19	11	"	yes	45	4 00	"	...	yes	"	"	"	"	"	15	"	968 00
"	20	10	...	9	"	"	45	4 00	"	...	no	"	"	"	"	"	11	"	120 00

PART III.

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STATISTICS

OF THE

COAL INDUSTRY.

THE COAL INDUSTRY.

“The coal measures of Michigan are supposed to occupy an area comprising about one-fifth of the central portion of the lower peninsula. The seams of coal are interstratified with beds of shale, beds of coarse friable sandstone and clay. The extent of the coal field is embraced in a circle, with a radius of fifty miles, having its center southeast of the village of St. Louis, in Gratiot county, and its southern boundary passing a few miles south of the city of Jackson. Over the greater portion of this wide field indications of coal have been found.”—Report of Commissioner of Mineral Statistics, 1881.

“The coal mining business is an industry that in Michigan is never likely to be of much magnitude. Nowhere has the coal seam been found to be thick enough to make it easily mined, and frequently, when it does exist in such quantity that it would do to mine, the overlying rock is too soft and friable to form a roof. Although the only deposits that have been worked to any profit have been found in Jackson and Shiawassee counties, still, coal exists to some extent in many of the counties in the lower peninsula. Very fine coal has been dug in Cass, Van Buren and Berrien counties. It does not exist in those localities in any appreciable quantity. Coal has been mined in a small way at Williamston and Grand Ledge, and the coal at the former place is of a superior quality for Michigan coal, but the deposit is wanting in roof, and the seam is thin. No matter if the coal is ever so desirable, if the overlying rock cannot be made to support the burden, the coal cannot be mined, and this is the trouble with much of the Michigan coal. It won't pay to strip it; it is too deep down for that, and it cannot be roomed out. This seems to be the trouble with the coal deposits in the Saginaw Valley. There is no overlying deposit of rock of sufficient strength to support the dirt as the coal is removed. The vicinity of the city of Jackson has ever been, and still continues to be, the best coal mining section in the State. Second to this is Corunna.”—From Report of Commissioner of Mineral Statistics, 1886.

“Michigan coal is light and friable, sometimes slaty, making a good deal of slack. The deposits of coal seams are thin, exceeding nowhere 3 to 4 feet in thickness; generally much less. The roof is frequently poor, and the ground wet. The mines are so low and wet that men do not like to work in them; and as the mining is done on contract, the miners must understand how to work to advantage, or they cannot make wages. They must learn how to mine here, as new miners cannot take the place of experienced ones.”—From Report of Commissioner of Mineral Statistics, 1887.

The only coal mined in Michigan during 1888 was by the Corunna Coal Company of Corunna, and the Bennett, Standard, and Emerson Companies at Jackson. The mine of the Corunna Coal Company is located three miles from Corunna, in the township of Caledonia, Shiawassee county. The company mines on lands owned by the farmers in that section, and pay a royalty of from 10 to 15 cents a ton. The vein is from two to three feet thick, and extends over an area of 1,000 acres. It is a bituminous coal, and in mining blasting is necessary. The men use common powder, which they purchase at their own expense of the company at a cost of \$2.10 per keg. They also pay 65 cents per 50 feet for gutta percha fuse. Some use the squib and needle. The men buy their own hand drills, costing from 50 cents to \$1 each, and buy their own picks and shovels. They pay the company 75 cents a month for sharpening picks and drills. Each man does his own blasting. The men get from \$1 to \$1.10 per ton, after it is screened, for mining coal. The company rent the dwellings to the employes for from \$2.25 to \$3.00 per month. The company physician resides in Corunna. To the physician's fund the married men contribute \$1 and the single men 50 cents per month. There is no miners' club or relief society and no associations for self improvement. The township school is fairly attended by the miners' children. The company run a store, where the families do their trading. The bills are deducted from the pay roll on pay day—every two weeks. All nationalities are employed.

The Commissioner of Mineral Statistics says: "The men cannot make good wages until they get used to working here, and learn to exercise skill in placing their blasts so that they shall be effective. At first men are almost certain to make a failure and they get discouraged and quit work. Only two serious casualties have occurred in ten years; one man was killed and another had a leg broken. The fatal accident was due to blasting." The safety of the mine is due to the fact that the "drift" is so low that the rock has no distance to fall.

The hoisting shaft is 70 feet deep. There are two air shafts, well ventilating the mine, and an entrance slope for the miners. From the bottom of the hoisting shaft are two main galleries, one running due west and one east. Every 100 yards from these main galleries extend the butt galleries, and from these are put in a room every 30 feet. There are 300 rooms in this mine. From one to four men work in a room. They mine in these rooms until they meet the gallery. The coal cars are hauled through the main gallery to the hoisting shaft by mules. We appointed two enumerators for the Corunna mine, and each failed to secure a canvass.

The Jackson coal, like all Michigan's production, is bituminous. It is much easier to mine than the Corunna coal, blasting not being necessary. This saves the expense of powder and fuse to the miners. The out-put of the Jackson mines is sold to the Michigan Central Railroad Company for locomotive use. The miners are paid by the car—25 cents per car, and earn from \$1.50 to \$1.75 per day for eight hours' work. The men in all of the mines are paid cash every two weeks. None of the companies run stores or own tenant houses. There are no miners' relief clubs or mine physician. The systems in vogue in other mining localities do not exist here. The men do their work, are paid cash, and there the relation between the employer and employé ceases.

The Bennett mine is located four miles west of Jackson, and is only worked sufficiently to supply the Bennett Sewer Pipe Co. with coal for their own use. Only eight men are employed in the mine. The company has been in operation one year, has a capital of \$2,000 and produced 7,644 tons of coal last year, valued at \$13,378.29; aggregate wages paid, \$11,101.77; expenses of mine other than labor, \$1,500.

The Standard mine is two miles east of Jackson, in Leoni township, on the Michigan Central. The company own 160 acres, and have a vein $2\frac{1}{2}$ to 4 feet thick. The hoisting shaft is 50 feet deep. Forty-five men are employed, of which our enumerator secured a canvass of 29. The company has been in operation $2\frac{1}{2}$ years, has a capital of \$10,000. Total wages paid for the year ending 1887, \$31,602.69; expenses other than labor, \$8,636. Tons of coal produced last year, 27,791, valued at \$48,170.75.

The Trumbull mine, at Trumbull Station, five miles west of Jackson, is owned by R. H. Emerson & Co. They give employment to 65 men. Our canvasser secured 40 of them. The hoisting shaft is 100 to the tip. There are no air shafts in the mine. The vein is from $2\frac{1}{2}$ to 4 feet thick. Capital stock \$10,000. Tons of coal produced for the six months ending Dec. 31, 1887, 11,091; cash value, \$19,999.16. Total wages paid for labor during the six months, \$9,700; expenses for other than labor, including royalty, \$8,797.

The following 69 names constitute the summary from the Emerson and Standard mines: The nationalities are: Ten Americans, 33 Englishmen, 10 Scotchmen, 12 Welshmen, 1 Irishman, 1 Canadian, 1 New Brunswick and 1 Newfoundland. Of those born in the United States 4 are of American parentage, 3 Irish and 3 English. The occupations are: One laborer, 2 engineers and 66 miners. Wages per day: Two at 50 cents, one 75 cents, four \$1, nine \$1.25, twenty-nine \$1.50, twenty \$1.75, four \$2. Nationalities

by occupation: Engineers, 1 American and 1 Englishman; laborer, 1 Englishman; miners, 31 Englishmen, 9 Americans, 10 Scotchmen, 1 Irishman, 12 Welshmen, 1 Canadian, 1 New Brunswick and 1 Newfoundland. Fifty-three of the men are married and 16 are single. Four have no children and 49 have children, to the number of 202. Number of children of American parents, 5; of foreign parents, 197. Eighty-four attend school and 151 depend upon their parents for support. One man works 7 hours a day, sixty-four 8 hours, two 10 hours and two 12 hours. Number of months employed during the year: One man 4 months, two 5, eight 6, five 7, thirty-three 8, eight 9, five 10, one 11 and six 12. Loss of time from sickness: Two men 12 days, one 18, one 36, three 52, one 54 and one 78 each. Loss of time from inability to obtain work: One man 6 days, one 26, seven 52, eight 78, one 65, one 68, two 86, one 92, twenty-seven 104, four 130, one 154, five 156 each. Loss of time from causes not stated: One man 18 days, three 26, one 52, one 66, one 54, one 72, one 156. Age began work: Two at 6 years, three at 7, seven 8, six 9, seventeen 10, eight 11, ten 12, two 13, seven 14, two 15, two 16, two 17 and one not answered. Number of years in the United States of those foreign born: One man 7 months, three 1 year, one 4, two 6, five 7, six 8, six 9, two 10, one 12, one 13, one 15, two 16, three 17, two 18, seven 19, five 20, and one each, 21, 22, 23, 24, 25, 26, 27, 28, 31 and 45. Occupation in the old country: One fireman, one blacksmith, one laborer, 49 miners and 7 not answered. Wages in the old country: Ten 75 cents a day, fifteen \$1 a day, thirteen \$1.25 a day, and one each \$1.50 a day, 35 cents a day, \$30 a month, \$12 a month, \$6.50 a week, \$7.50 a week, \$25 a year and \$50 a year. Number of hours for a day's work in the old country: Seven men worked 6 hours, three 7, eleven 8, three 9, fifteen 10, five 12 and one 14. Number owning homes and value: One \$30, one \$200, one \$300, two \$400, one \$450, three \$500, two \$600, two \$700, three \$800, two \$1,000, one \$1,500, one \$1,800, two \$2,000, one \$4,000, total, \$21,580, owned by 23 men. The homes are mortgaged for the following: Two for \$200 each, one \$85, two \$150, one \$350, total \$1,135; rate of interest: Two 7 per cent, one 8, one 10 and one 15. Rent of homes: One \$2 per month, two \$3, two \$3.50, six \$4, one \$4.25, two \$4.50, seven \$5, one \$5.25, one \$5.50, one \$7. Board per week: One pays \$2, two \$2.50, four \$3, four \$3.50, one \$4, one \$5. Total annual earnings of the men, \$22,172; of the children, \$1,285. Nine men sent \$795 to pay passage of relatives to this country. Twenty-one sent \$830 as assistance to relatives in the old country. Three men saved a total of \$300 during the year: One \$25, one \$125 and one \$150. Fifteen of the foreigners had \$2,082 on arrival in this country and 44 had nothing. In reply to the question, are you as well off as five years ago, 46 said yes, 22

no, and 1 did not answer. Of those who replied no 12 said they were not as well off on account of less work, 8 less wages and 2 less money. Fifty-nine said that wages were not as good as in previous years in this country and 10 did not answer. Sixty-seven said that they had good health and 2 not good. Three have their life insured for \$1,000 each and 2 for \$2,000 each; total, \$7,000. Eight belong to a benefit society. Six receive \$3 per week in case of sickness, one \$4 and one \$8. Five own an organ and 36 sewing machines. Eighteen take a daily paper, 19 a weekly and 1 a monthly.

TABLE NO. 3.—Statistics of the Coal Industry.

Occupation.	Line Number.	Age.	Nativity.	Nativity of parents.	How long in U. S., if foreign born.—(Years.)	Married or single.	How many children in family.	How many attend school.	How many depend on you for support.	How many years at present occupation.	How long with present employer.—(Years.)	Number of months employed during year.	How many hours for a day's work.	Wages paid.	Annual earnings.	Are you paid cash or trade.	How often are you paid.	Amount saved during the year.	How do wages compare with former years in this country.	What occupation did you follow in the old country.	Wages received in the old country.
Miner.....	1 30	England	England	England	6	m	5	2	6	22	1 yr	8	8	82 00 pr. d	9416 00	c	s m	.....	lower now	mining	\$1 00 per day
"	2 54	"	"	"	8	m	5	3	4	42	1 wk	8	8	1 00 "	156 00	c	s m	.....	not so good	farmer	50 00 per year
"	3 32	"	"	"	26	m	4	8	5	8	9 mo	8	8	1 50 "	312 00	c	s m	.....	about half	mining	1 00 per day
"	4 33	"	"	"	7	m	4	4	5	23	8 yrs	8	8	1 50 "	273 00	c	s m	.....	not so good large red't'n	"	1 00 "
"	5 38	"	"	"	16	m	4	2	5	20	7 "	8	8	1 50 "	312 00	c	s m	.....	not so good	farmer	25 00 per year
"	6 33	"	"	"	10	m	4	8	6	14	8 mo	8	8	1 75 "	364 00	c	s m	.....	1/2 less	mining	1 25 per day
"	7 33	"	"	"	9	m	4	8	5	25	9 yrs	8	8	1 25 "	200 00	c	s m	.....	not so high	"	6 50 per wk
"	8 34	"	"	"	4	m	4	8	6	17	4 1/2 yrs	8	8	1 25 "	200 00	c	s m	.....	not so good	"	7 50 "
"	9 32	"	"	"	20	m	9	8	5	22	10 yrs	8	8	1 75 "	364 00	c	s m	.....	about half	"	1 00 per day
"	10 45	"	"	"	20	m	9	8	5	25	10 yrs	8	8	1 75 "	364 00	c	s m	.....	"	"	"
"	11 66	"	"	"	20	m	3	..	2	48	7 mo	7	8	1 50 "	273 00	c	s m	.....	"	"	1 25 "
"	12 31	"	"	"	19	s	..	..	..	10	8 "	10	19	1 25 "	325 00	c	s m	.....	not so good	not ans'w'd	not ans'd
"	13 25	"	"	"	21	s	1	..	..	15	10 yrs	8	8	1 50 "	312 00	c	s m	.....	about half	"	"
"	14 16	"	"	"	..	s	..	..	..	5	8 mo	8	8	1 00 "	208 00	c	s m	.....	not ans'w'd	"	"
"	15 54	"	"	"	..	s	2	1	3	40	9 "	8	8	1 25 "	200 00	c	s m	.....	much less	mining	75 per day
"	16 53	"	"	"	28	m	8	8	9	12	6 "	12	8	1 50 "	468 00	c	s m	.....	"	sailor	12 00 per mo
"	17 24	"	"	"	8	m	..	..	2	12	1 "	6	8	1 50 "	284 00	c	s m	.....	poorer	mining	35 per day
"	18 43	"	"	"	31	m	6	3	6	27	11 yrs	10	8	1 75 "	455 00	c	s m	.....	half less	not ans'w'd	not ans'd
"	19 44	"	"	"	9	m	8	2	4	30	9 "	8	8	1 75 "	364 00	c	s m	.....	much less	mining	1 25 per day
"	20 23	"	"	"	19	m	8	..	8	10	6 mo	10	8	1 75 "	455 00	c	s m	.....	lower	not ans'w'd	not ans'd
"	21 41	"	"	"	7	m	..	..	1	25	4 "	6	8	1 50 "	284 00	c	s m	.....	worse	mining	1 00 per day
"	22 20	"	"	"	19	s	..	..	..	10	1 yr	8	8	1 75 "	364 00	c	s m	.....	not ans'w'd	not ans'w'd	not ans'd
"	23 16	U. S.	U. S.	Ireland	19	m	9	4	8	83	12 yrs	5	8	1 75 "	364 00	c	s m	.....	much lower	mining	1 00 per day
"	24 16	"	"	"	..	s	..	..	..	5	5 mo	8	8	1 50 "	65 00	c	s m	.....	not ans'w'd	"	"
"	25 18	"	"	"	..	s	..	..	..	8	7 wks	6	8	1 25 "	196 00	c	s m	.....	not so good	"	"
"	26 28	"	"	"	..	s	..	..	1	13	8 mo	8	8	1 50 "	312 00	c	s m	.....	"	"	"
"	27 16	"	"	"	..	s	..	..	..	1/4	6 "	6	8	1 50 "	78 00	c	s m	.....	not ans'w'd	"	"
"	28 16	"	"	"	..	s	..	..	..	5	6 wks	8	8	75 "	156 00	c	s m	.....	less	"	"
"	29 32	"	"	"	..	m	1	..	2	19	5 mo	8	8	1 50 "	312 00	c	s m	\$125	about half	"	"
"	30 33	"	"	"	..	s	..	..	..	4	8 "	10	8	1 50 "	390 00	c	s m	.....	lower	"	"
"	31 54	Scotland	Scotland	England	20	m	7	2	8	40	8 "	8	8	1 25 "	260 00	c	s m	.....	about half	mining	75 per day
"	32 26	"	"	"	8	m	2	..	8	10	8 "	8	8	1 25 "	260 00	c	s m	.....	not so good	"	75 "
"	33 39	"	"	"	19	m	9	5	..	32	3 "	7	8	1 50 "	273 00	c	s m	.....	much less	"	1 00 "

"	34	31	"	"	"	9	m	2	1	3	14	9	"	8	8	1	50	"	812	00	c	s m	---	not so good about half less	"	1 50	"
"	35	30	"	"	"	16	m	3	2	4	15	2	"	8	8	1	50	"	812	00	c	s m	---	about half less	"	1 25	"
"	36	34	"	"	"	8	m	4	1	5	24	3	"	9	8	1	75	"	432	25	c	s m	---	about half less	"	1 00	"
"	37	45	"	"	"	19	s	...	...	2	25	13	"	8	8	1	50	"	812	00	c	s m	---	not so good	"	75	"
"	38	55	Ireland	Ireland	Ireland	24	m	2	1	3	25	11	"	8	8	1	25	"	260	00	c	s m	---	not so good	"	75	"
Engineer	39	38	Wales	Wales	Wales	16	m	5	3	6	31	4	mo	4	8	1	50	"	156	00	c	s m	---	third less	"	75	"
Miner	40	36	U. S.	England	England	...	m	4	2	4	16	1	yr	12	8	1	75	"	546	00	c	s m	150	less	mining	1 25 per day	
"	41	30	Wales	Wales	Wales	1	m	3	...	4	22	1	"	8	8	1	75	"	364	00	c	s m	---	not ans'w'd	"	1 25	"
"	42	60	Scotland	Scotland	Scotland	18	m	6	...	1	50	1	"	8	8	1	50	"	812	00	c	s m	---	not so good	"	1 25	"
"	43	18	U. S.	U. S.	"	...	s	...	...	...	2	8	mo	12	8	1	00	"	812	00	c	s m	---	not ans'w'd	"	...	"
"	44	42	England	England	England	17	m	6	4	7	20	2	yr	8	8	1	50	"	812	00	c	s m	---	not so good lower	mining	75 per day	
"	45	49	Wales	Wales	Wales	25	m	2	...	1	37	6	mo	11	8	1	50	"	429	00	c	s m	---	not ans'w'd	"	1 25	"
"	46	30	Wales	Wales	Wales	1	m	3	...	4	22	1	yr	8	8	1	75	"	364	00	c	s m	---	not ans'w'd	"	30	00 per mo
"	47	38	Scotland	Scotland	Scotland	7	m	2	...	3	11	9	mo	9	8	1	25	"	292	50	c	s m	---	not so good	"	75	per day
"	48	62	Scotland	Scotland	Scotland	45	m	13	1	4	53	2	3/4 yrs	8	8	1	00	"	208	00	c	s m	---	"	not ans'w'd	...	"
"	49	22	Wales	Wales	Wales	18	m	1	...	2	12	1	yr	9	8	1	50	"	351	00	c	s m	---	not ans'w'd	mining	6 00 per wk	
"	50	16	U. S.	England	England	...	s	...	...	...	2	2	yr	7	8	1	00	"	208	00	c	s m	---	not so good little worse	"	75	per day
"	51	39	Wales	Wales	Wales	20	m	4	2	5	33	9	mo	10	8	2	00	"	278	00	c	s m	---	smaller	mining	1 00	"
"	52	37	England	England	England	7	m	1	1	2	28	3	yr	8	8	1	75	"	384	00	c	s m	---	about half third less	"	1 25	"
"	53	39	Wales	Wales	Wales	17	m	3	3	4	22	3	"	8	8	1	75	"	624	00	c	s m	---	poorer	"	1 25	"
"	54	66	"	"	"	20	m	4	1	2	50	4	"	8	8	1	75	"	384	00	c	s m	---	not so good	"	4 50	per wk
"	55	41	"	"	"	10	m	5	2	6	30	1	5 wks	7	8	1	75	"	318	50	c	s m	---	poorer	"	...	"
"	56	34	England	England	England	6	m	5	3	6	22	5	mo	6	8	1	75	"	273	00	c	s m	---	not so good	"	...	"
"	57	47	Wales	Wales	Wales	26	m	3	...	1	23	21	mo	12	7	2	00	"	624	00	c	s m	---	not so good	"	...	"
"	58	21	Wales	Wales	Wales	9	s	...	...	...	9	9	yr	9	8	1	50	"	351	00	c	s m	---	poorer lower	"	...	"
"	59	23	"	"	"	9	s	...	...	...	10	8	"	9	8	1	50	"	351	00	c	s m	---	not so good less	mining	1 25 per day	
"	60	24	Scotland	Scotland	Scotland	23	s	...	...	...	18	3	"	8	8	1	75	"	364	00	c	s m	---	much worse	"	...	"
"	61	23	New B.	New B.	"	19	s	...	...	...	18	3	"	9	8	1	75	"	409	50	c	s m	---	less now	not ans'w'd	...	"
"	62	26	Canada	Canada	"	12	m	1	2	2	11	1	"	9	8	1	50	"	351	00	c	s m	---	not ans'w'd	fireman	1 00 per day	
"	63	36	England	England	England	7	m	2	2	3	24	9	mo	9	8	1	75	"	409	50	c	s m	---	much less	mining	1 25	"
"	64	19	Wales	Wales	Wales	13	s	...	...	...	7	5	yr	8	8	1	50	"	312	00	c	s m	---	much lower	blacksmith laborer	1 25	"
"	65	54	England	England	England	22	m	...	...	...	25	4	"	5	8	1	50	"	195	00	c	s m	---	not ans'w'd	"	...	"
"	66	24	Newfoundl'd	Newfoundl'd	Newfoundl'd	7	m	...	...	...	8	7	mo	6	8	1	50	"	273	00	c	s m	---	much less	"	...	"
"	67	42	England	England	England	17	m	...	...	...	20	2	yr	12	8	2	00	"	812	00	c	s m	---	not ans'w'd	"	...	"
Engineer	68	38	"	"	"	8	m	3	2	3	24	6	"	12	10	1	50	"	624	00	c	s m	---	not ans'w'd	"	...	"
Laborer	69	35	"	"	"	1	m	3	...	4	24	1	"	12	10	1	50	"	468	00	c	s m	---	not ans'w'd	"	...	"

* Semi monthly. † And board.

LABOR AND INDUSTRIAL STATISTICS.

TABLE NO. 8.—Continued.

Occupation.	Line number.	How many hours for a day's work in the old country.	Amount of money at interest or in the bank.	If foreign born, how much money did you have on arrival in U. S.	Do you own your home. If so, its value.	If mortgaged, amount of mortgage.	Rate of interest.	Are you as well off as five years ago.	Loss of time.			If renting home, monthly rental.	If boarding, cost per week, including room.	Life insurance, how much.	Do you belong to a benefit society.	Weekly benefit in case of sickness or accident.	Have you a sewing machine.	Have you a piano.	Have you an organ.	Do you take a newspaper.			Age began work.	State of health then.	State of health now.	Amount of relief rendered friends in the old country.	Amount of money furnished to friends for passage to U. S.
									From sickness—(Days.)	Inability to obtain work—(Days.)	Causes not stated. —(Days.)									Daily.	Weekly.	Monthly.					
Miner	1			\$20	\$200			yes	104	104		\$5 25			no		yes	no	no	no	yes	no	8	good	good		
"	2			1,000	no			no	156	156		5 00			"		"	"	"	"	no	"	9	fair	fair		
"	3				450	\$85	7	no	104	104					"		"	"	"	"	no	"	16	good	good		
"	4				no			yes	156	156		4 00			"		no	"	"	"	no	"	10	"	"		
"	5							no	180	180					"		no	"	"	"	no	"	9	"	"		
"	6				800			yes	92	92		4 25		\$1,000	yes	\$3 00	yes	"	"	"	yes	no	14	fair	fair	\$100	
"	7				no			no	104	104					no		no	"	"	"	no	yes	10	good	good	25	
"	8				400			yes	68	68		3 00			"		yes	"	"	"	no	"	12	"	"	10	
"	9				no			"	52	52				2,000	yes	8 00	"	"	"	"	yes	"	10	"	"	100	
"	10			10	4,000			"	104	104					yes			"	"	"	no	"	10	"	"		
"	11				2,000			"	180	180			3 50		no		no	"	"	"	no	"	17	"	"	300	\$80
"	12				no			"	52	52	18				"		yes	"	"	"	yes	no	10	"	"		
"	13				"			no	86	86		3 00			"		no	"	"	"	no	"	10	"	"		
"	14				800			yes	104	104			2 50		"		yes	"	"	"	no	"	11	"	"		
"	15			20				no	104	104					"		yes	"	"	"	no	"	14	"	"		
"	16				300			yes					3 00		"		"	"	"	"	yes	no	12	"	"		
"	17			50	no			"	156	156					"		no	"	"	"	yes	no	12	"	"	10	
"	18				500			"	52	52	26				"		yes	"	"	yes	no	"	16	"	"		
"	19			300	700			"	78	78					yes	3 00	no	"	"	yes	no	"	11	"	"		
"	20				no			no	52	52		2 00			no		yes	"	"	no	"	"	13	"	"	10	
"	21				"			no	130	130	26				"		no	"	"	"	no	"	15	"	"		
"	22				"			yes							"		"	"	"	"	yes	no	10	"	"		
"	23				500			no	104	104					"		yes	"	"	"	no	"	11	"	"	190	
"	24				no			yes							"		no	"	"	"	no	"	16	"	"		
"	25				"			no	156	156		5 00			"		yes	"	"	"	yes	no	10	"	"		
"	26				"			"	104	104	156				"		yes	"	"	"	no	"	14	"	"		
"	27				"										"		no	"	"	"	"	"	14	"	"		
"	28				"			yes	104	104			2 50		"		"	"	"	"	yes	no	11	"	"		
"	29				"			"	104	104			5 00		"		yes	"	"	"	yes	no	12	"	"		
"	30				"			"	52	52					"		no	"	"	"	"	"	14	"	"		
"	31				1,000			"	104	104					"		yes	"	"	"	"	"	14	"	"		
"	32				no			no	104	104		5 00			"		yes	"	"	"	no	"	10	fair	good	20	97
"	33			40	700	150	7	yes	78	78					"		no	"	"	"	no	"	7	good	good		

PART IV.

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STATISTICS

OF THE

GRINDSTONE INDUSTRY.

THE GRINDSTONE INDUSTRY.

“Up on the shores of Lake Huron, at the extreme end of the ‘thumb’ of Michigan’s lower peninsula, in Huron county, is located Grindstone City. It takes its name from the fact of its location on the most extensive grindstone quarries known in America. These strata stretch away in a most limitless extent, containing stonesufficient to supply the world with this most important article for centuries. These quarries were first worked in 1838. The stone extends from near the surface to a depth of sixteen feet, and lies in nearly horizontal strata, which varies from a few inches to two feet in thickness. That nearest the surface is a trifle softer than the rest. The features of this stone are a hard, fine grit, and the absence of all foreign substances, which especially adapt it for cutlery and sharp edge tools. When first taken from the quarry the stone is soft and easily broken, but a few days’ exposure to the sun evaporates the ‘sap’ and fits the stone for use. Grindstones are made by first chipping the block as nearly as possible to the size of the intended stone, after which it is ‘hung’ and turned to the requisite thickness and diameter. This work is done in mills near the quarries, from which the stones are shipped by water to Detroit, Chicago and New York.”—From report of Commissioner of Mineral Statistics, 1881.

At Grindstone City there are now two companies manufacturing grindstones and scythe stones. The Lake Huron Stone Co., which has been in operation 34 years, with a capital of \$125,000, employs 95 men and produces 4,500 tons of grindstones per year and 2,500 gross of scythe stones. The cash value of the stone is \$8.75 per ton and of the scythe stones \$2.50 per gross. The Cleveland Stone Co. has been in operation 26 years, has a capital of \$50,000, gives employment to 100 men, makes 3,000 tons of grindstones and 5,000 gross of scythe stones per year. Cash value of the grind and scythe stones, \$26,250. Each company owns and runs a store, where the men buy their provisions and goods, although trading is not compulsory and many make their purchases of other merchants in the village. The pay day is monthly, when, after deducting the amount of trade at the store, the men receive the balance due them in cash. The companies own a few dwellings, which are rented to the workmen. There is no local benefit society among the men, and no company physician. Many belong to the Maccabees and other kindred fraternal societies. The educational advantages are those afforded by the district school and library. The scythe rubbers and some other branches of the business requires skill and is paid for by the piece. The men are only employed seven months in the year, as the stone freezes and cannot be worked in the cold weather. In the two quarries our enumerator secured a canvass of 124 men. The summary is as follows:

The nationalities are: Two Frenchmen, 4 Englishmen, 10 Scotchmen, 12 Irishmen, 13 Germans, 25 Americans, 57 Canadians and 1 born at sea. Of the 25 born in the United States, one is of American parentage, 2 French, 3 German, 5 Scotch, 6 Irish and 8 English. The occupations are: Fifty-three quarry-men, 23 laborers, 10 eye cutters, 7 rubbers, 5 trenchers, 5 trimmers, 5 teamsters, 4 foremen, 3 turners, 2 blacksmiths, 2 engineers, 1 carpenter, shipping clerk, lumberman, fireman, and general jobber. Wages per month: Rubbers, two at \$39, four \$52 and one \$65; quarrymen, two at \$35.62, ten \$39, one \$40.82, three \$41.60, ten \$42.90, one \$44.20, twenty-five \$45.50 and one \$48.60; foreman, one \$52, one \$58.50 and two \$65; the carpenter, \$45.50; teamsters, one \$32.50, one \$35.62 and three \$39; blacksmiths, one \$32.50 and one \$35.50; laborers, one \$19.50, one \$20, one \$26, eleven \$32.50, two \$35.62, five \$39 and one \$40.82; eye cutters, two \$39, one \$41.60, five \$42.90, one \$43 and one \$45.50; the shipping clerk, \$50; five trimmers, \$39; the lumberman, \$28; the fireman, \$41.60; trenchers, one each at \$26, \$39, \$45.50, \$52 and \$65; turners, two \$52 and one \$65; engineers, one \$20.80 and one \$42.90; the general jobber, \$45.50. Nationality by occupations: Rubbers, 1 American, 2 Irishmen and 4 Canadians; quarrymen, 1 Englishman, 1 Frenchman, 4 Germans, 5 Irishmen, 6 Scotchmen, 11 Americans and 25 Canadians; foremen, 1 at sea and 3 Irishmen; carpenter, Scotchman; blacksmiths, 1 Englishman and 1 Scotchman; teamsters, 1 American, 2 Canadians and 2 Englishmen; laborers, 4 Americans, 9 Germans and 10 Canadians; eye cutters, 1 Frenchman, 2 Americans and 7 Canadians; the shipping clerk, American; trimmers, 1 Scotchman and 4 Americans; the lumberman, American; the fireman, Canadian; trenchers, 5 Canadians; turners, 1 Scotchman and 2 Canadians; engineers, 1 Irishman and 1 Canadian; the general jobber, Canadian. Sixty-six of the men are married and 58 single. Nine of the married men have no children and 57 have children. Of the men having no children 1 is a Scotchman, 1 American and 7 Canadians. Five have 1 child each, twelve 2, nine 3, seven 4, ten 5, seven 6, two 7, three 8, one 9 and one 10; total, 233. Seventeen are children of Americans and 216 of foreigners. One hundred and thirty-two attend school; 209 depend upon their parents for support. One man works 9 hours a day, one hundred and twenty-one 10, one 12 and one 15. Number of months employed during the year: One at 3, one 5, twenty-one 6, seventy-three 7, eight 8, three 9, nine 10, two 11 and six 12. Loss of time from sickness: One man 2 days, three 6, one 7, one 8, one 12, one 13, three 18, one 24, one 26, one 30, one 39, one 52, one 60, one 72, two 78 and one 104. Loss of time from inability to obtain work: Two 52 days, three 48, three twelve and one each 24, 33, 60, 72 and 78. Loss of time from causes not stated: Five men 6 days, twelve 12, one 14, nine 18, ten 24, one 26, three 30, one 52 and one 104. Ages of the men: One 15, two 16, four 17, four 18, four 19, six 20, nine 21, seven 22, nine 23, five 24, five 25, four 26, four 27, five 28, six 29, three 30, four 31, seven 32, three 33, two 34, five 35, one 36, three 37, two 38, five 39, two 40, one 43, two 44, two 45, one each 46, 47, 49, 52, 54, 63 and 64. Began work at the following ages: Two at 7 years, three 8, four 9, twenty-two 10, nine 11, twenty-two 12, eight 13, twenty-eight 14, eleven 15, nine 16 and one each at 17, 19, 21, 23 and 25. Number of years the foreign born have been in the United States; Four 2 years, three 3, four 4, three 5, three 6, nine 7, ten 8, seven 9, two 10, three 11, four 12, two 13, two 14, six 15, six 16, two 17, seven 18, two 19, two 20, two 21, four 22, one 23, three 24, one 30, and one each 25, 26, 28 and 37.

Occupation in the old country: Fifty-six not answered; 22 farmers, 2 each quarrymen, clerk, blacksmith, laborer and teamster; 1 each iron worker, carpenter, agent, butcher, stone work, store keeper, miner, saw mill, shoemaker, maltster and sugar maker. Wages received in the old country: All did not answer: Three received \$12 a month, three \$18, two \$24, two \$30, two \$13, two \$39, and one each \$2, \$3.60, \$6, \$6.30, \$11, \$13, \$14.40, \$15.60, \$16, \$20, \$22.62, \$26, \$32.50 and \$42. Earnings for the year: Twelve \$400, nine \$275, six \$325, six \$200, six \$350, four \$273, three \$218, three \$227, three \$250, two each, \$364, \$235, \$450, \$225, \$195, \$343, \$600, \$500, \$285, \$213, and one each \$351, \$308, \$624, \$428, \$455, \$168, \$136, \$182, \$540, \$291, \$630, \$249, \$499, \$520, \$702, \$280, \$145, \$430, \$546, \$700, \$360, \$260, \$390, \$480. Total earnings, \$40.902; average per man, \$329.85. The children in 3 families earned a total sum of \$340, as follows: One \$90, one \$100 and one \$150. Eleven sent money to friends in the old country: Three \$100 each, two \$10 each and one each the following: \$20, \$25, \$30, \$47, \$60 and \$193; total, \$695. Twelve sent money to pay passage of relatives to this country: Two \$30, two \$40, and one each \$14.25, \$45, \$48, \$80, \$90, \$197, \$300; total, \$1,039.25. Sixty-one saved money during the year: Twenty-one saved \$100 each, eighteen \$50, six \$150, four \$75, three \$200, two \$300, two \$125, and one each \$35, \$80, \$160, \$175 and \$250; total, \$6,350. Seven have money at interest or in savings bank: One each \$25, \$75, \$100, \$300, \$400, \$500 and \$600; total, \$2,000. Forty-four own homes valued at: Seven \$300 each, six \$1,000 each, three \$150, three \$200, three \$500, three \$600, three \$1,200, two \$400, two \$450, two \$700, and one each \$75, \$100, \$225, \$260, \$350, \$900, \$1,500, \$1,550, \$2,000 and \$2,100; total, \$28,210. Several of the above enumerated as homes are farmers, the owners of which work in the quarries in the summer season. Seven of the home owners are mortgaged: Two for \$200 each, and 1 each for \$35, \$100, \$150, \$250, \$400; total, \$1,335. Five pay 10 per cent. interest, 1 eight per cent. and one not given. Forty-two pay rent: One pays 50 cents per month, three \$1, two \$1.50, five \$2, one \$2.50, sixteen \$2.70, ten \$3, three \$3.50 and one \$8. Those boarding do not all report price of board. Of the 51 reporting, one pays \$2 per week, eleven \$3 and thirty-nine \$3.50. Twenty-one of the foreigners had money upon arrival in this country: Four had \$10 each, three \$50, two \$100, two \$400, and one each \$3, \$6, \$7, \$11, \$15, \$25, \$75, \$275, \$500 and \$2,000; total, \$4,107. Forty-six said that they were as well off as five years ago, 44 said that they were better off, and 13 said that they were not as well off. Of the 13 who said that they were not as well off, 8 gave sickness as the reason, 2 less money, 1 bad luck and 2 gave no reason. To the question, how do wages compare with previous years in this country? Forty-eight replied the same, 56 better, 14 not as good and 6 did not answer. One reported his health as not being good and 123 as being good. Two have a life insurance of \$1,000 each and 1 for \$2,000; total, \$3,000. Ten belong to benefit societies and receive \$3 per week when sick. Four own organs and 40 own sewing machines. Six take a monthly magazine or paper, and 63 take weekly papers.

TABLE NO. 4.—Statistics of the Grindstone Industry.

Occupation.	Line number.	Age.	Nativity.	Nativity of parents.	How long in U. S., if foreign born.—(Years.)	Married or single.	How many children in family.	How many attend school.	How many depend on you for support.	How many years at present occupation.	How long with present employer.—(Years.)	Number of months employed during year.	How many hours for a day's work.	Wages paid.	Annual earnings.	Are you paid cash or trade.	How often are you paid.	Amount saved during the year.	How do wages compare with former years in this country.	What occupation did you follow in the old country.	Wages received in the old country.
Trimmer.....	121	Scotland..	Scotland..	Scotland..	16	s	..	..	..	..	5 yrs	7	10	\$39 00	\$280 00	c, t	m	..	same	..	..
General jobber.....	221	U. S.....	Ireland..	Ireland..	24	s	2	..	3	14	2 5	7	10	39 00	400 00	c	m	\$150	better	..	..
Eye cutter.....	329	Ireland..	..	..	10	s	..	..	..	2	2 7	7	10	45 50	400 00	c	m	..	same	..	..
Engineer.....	421	Canada..	England..	England..	4	s	..	..	..	2	2 2	7	10	39 00	400 00	c	m	..	better	..	..
..	517	..	..	..	..	s	..	..	..	2	2 2	7	10	20 30	145 60	c	m	..	same	..	..
Eye cutter.....	628	..	..	..	12	m	3	..	4	2 1	1	7	10	42 90	300 30	c, t	m	50	better	saw mill	not answered
Teamster.....	732	England..	..	..	1 1/2	m	4	1	5	1 1/2	1 1/2	11	10	39 00	420 00	c, t	m	..	"	shoemaker	\$89 00 per mo
..	839	Canada..	Scotland..	Scotland..	8	m	4	1	5	6 6	6	10	10	39 00	380 00	c, t	m	..	"	not answ'd	not answered
Rubber.....	935	..	..	..	3	m	8	2	4	3 3	3	8	10	39 00	400 00	c, t	m	50	"	farmer	"
..	1029	..	..	..	6	m	2	1	3	9	9	8	10	39 00	350 00	c, t	m	50	"	..	..
Trencher.....	1117	..	..	..	9	s	..	..	..	3	3	7	10	39 00	600 00	c	m	..	"	..	..
"	1222	..	..	..	10	s	..	..	2	1 1	1	12	10	45 50	546 00	c	m	100	same	..	..
"	1320	..	..	..	6	s	..	..	2	1 1	1	7	10	25 00	200 00	c	m	..	"	..	..
"	1449	..	..	..	28	m	6	2	7	2 2	2	7	10	52 00	364 00	c, t	m	..	"	not answ'd	not answered
Turner.....	1563	Scotland..	Scotland..	Scotland..	37	m	10	3	4	27 30	30	7	10	52 00	400 00	c, t	m	..	better	maltster	\$32 63 per mo
"	1632	Canada..	Ireland..	Ireland..	14	m	4	2	5	3	8	10	10	65 00	700 00	c, t	m	100	"	not answ'd	not answered
Laborer.....	1735	..	Canada..	Canada..	1 1/2	m	..	..	1	1 1/2	6 mo	7	10	39 00	250 00	c	m	100	same	"	"
"	1820	..	..	..	11	s	..	..	..	2 2	2 yrs	6	10	26 62	213 72	c, t	m	..	not answ'd	..	..
"	1918	..	..	..	11	s	..	..	2	2 2	2	6	10	26 62	300 00	c	m	..	"	..	..
"	2080	..	..	Eng. & Irish	18	m	8	2	5	2 2	2	9	10	39 00	360 00	c, t	m	..	better	..	..
"	2123	..	..	..	15	m	..	..	1	6	6	7	10	39 00	275 00	c, t	m	50	same	..	..
"	2228	..	..	..	7	s	..	..	..	1 1	1	7	10	20 00	200 00	c	m	100	..	farmer	\$20 00 per mo
"	2318	..	..	..	7	s	..	..	..	7 7	7	7	10	32 50	250 00	c, t	m	..	better	..	..
"	2417	U. S.....	Scotland..	Scotland..	8	s	..	..	..	3 3	3	8	10	32 50	268 90	c, t	m	150	not answ'd	..	..
"	2532	Germany..	Germany..	Germany..	15	s	2	..	3	2 2	2	7	10	32 50	200 00	c, t	m	..	"	not answ'd	not answered
"	2618	..	..	..	..	s	..	..	..	3 m	3 mo	6	10	32 50	196 00	c	m	..	same	..	..
Quarryman.....	2720	Scotland..	Scotland..	Scotland..	7	s	..	..	2	3	6 mo	6	10	45 50	275 00	c, t	m	..	better	farmer	\$13 00 per mo
"	2831	..	..	..	7	m	2	..	3	7 8	8 yrs	7	10	45 50	300 00	c	m	..	"	laborer	26 00
"	2921	U. S.....	..	..	..	s	..	..	..	3 3	3	7	10	40 83	285 74	c, t	m	100	"	..	..
"	3021	..	..	..	..	s	..	..	..	2 2	2	6	10	39 00	250 00	c, t	m	150	"	..	..
"	3123	..	..	..	..	s	..	..	..	1 1	1	7	10	39 00	340 00	c	m	100	"	..	..
"	3223	..	..	..	..	s	..	..	..	1 1	1	7	10	35 62	300 00	c	m	100	"	..	..

"	83 82	Canada	"	"	18	m	5	2	6	7	4	"	*	7	10	42	90	"	300 00	c, t	m	75	"	not answered
"	84 27	"	"	"	8	m	2	2	8	7	2	"	*	7	10	39	00	"	300 00	c, t	m	50	same	not answered
"	85 53	"	"	"	30	m	5	2	5	4	1	"	*	8	10	42	90	"	300 00	"	m	"	not so good	"
"	86 29	"	"	"	18	m	"	"	1	7	1	"	*	7	10	42	90	"	300 00	c	m	"	better	"
"	87 83	"	"	"	30	m	5	2	6	11	8	yrs	*	10	10	45	50	"	300 00	c, t	m	"	same	"
"	88 23	Ireland	"	"	16	s	"	"	"	8	1	"	*	6	10	42	90	"	300 00	c, t	m	125	better	"
"	89 37	Canada	Canada	"	21	m	"	"	1	4	8	"	*	6	10	45	50	"	300 00	c	m	"	not so good	"
"	40 23	"	Scotland	"	17	m	"	"	1	7	6	"	*	7	10	45	50	"	400 00	c	m	100	better	"
"	41 29	"	"	"	22	m	"	"	4	8	4	"	*	7	10	42	90	"	350 00	c, t	m	100	lower	"
"	42 28	"	"	"	2	s	"	"	"	1	1	"	*	6	10	35	62	"	213 00	c	m	"	same	not answered
"	43 24	"	"	"	13	s	"	"	"	2	2	"	*	6	10	42	90	"	300 00	c	m	100	"	"
"	44 23	"	England	"	"	m	"	"	2	4	2	"	*	6	10	41	60	"	480 00	c, t	m	"	better	"
"	45 26	"	"	"	4	m	"	"	1	2	3	"	*	7	10	39	00	"	235 00	c, t	m	"	same	\$13 00 per mo
"	46 34	France	France	"	9	m	"	"	10	9	6	"	*	7	10	45	50	"	300 00	c, t	m	35	better	18 00 "
"	47 24	Germany	Germany	"	4	s	"	"	1	2	2	"	*	6	10	39	00	"	235 00	c, t	m	"	same	24 00 "
"	48 23	"	"	"	12	s	"	"	"	2	2	"	*	6	10	41	60	"	300 00	c	m	"	better	"
"	49 21	U. S.	France	"	"	s	"	"	2	6	5	"	*	7	10	39	00	"	275 00	c, t	m	50	same	"
"	50 34	"	"	"	"	s	"	"	5	1	1	"	*	7	10	42	90	"	300 00	c, t	m	"	not so good	"
Shipping clerk	51 35	"	U. S.	"	"	m	"	"	7	6	14	"	*	12	10	50	00	"	600 00	c	m	300	favorable	"
Eye cutter	52 22	"	England	"	"	s	"	"	"	2	1	"	*	8	9	43	90	"	343 20	c	m	200	better	"
Trimmer	53 19	"	"	"	"	s	"	"	"	2	2	"	*	7	10	39	00	"	273 00	c	m	250	same	"
Lumberman	54 22	"	Ireland	"	"	s	"	"	"	3	"	"	*	6	15	28	00	"	168 00	c	m	"	better	"
Trimmer	55 19	"	Germany	"	"	s	"	"	"	2	2	yrs	*	7	10	39	00	"	273 00	c, t	m	75	same	"
Eye cutter	56 21	"	England	"	"	s	"	"	"	1	3	"	*	7	10	42	90	"	300 00	c, t	m	50	better	"
Laborer	57 16	"	"	"	"	s	"	"	1	1	1	"	*	7	10	19	50	"	136 50	c, t	m	"	same	"
"	58 16	"	Scotland	"	"	s	"	"	"	3	"	"	*	7	10	32	56	"	227 00	c, t	m	75	"	"
"	59 15	"	Ireland	"	"	s	"	"	"	1	1	"	*	7	10	26	00	"	182 00	c, t	m	50	"	"
Quarryman	60 37	"	"	"	"	m	"	"	5	11	2	"	*	11	10	45	50	"	500 00	c, t	m	"	"	"
Teamster	61 28	"	Germany	"	"	s	"	"	"	1	1	"	*	7	10	32	50	"	227 00	c	m	"	better	"
Quarryman	62 33	"	"	"	"	m	"	"	3	11	9	"	*	12	10	45	50	"	546 00	c, t	m	"	"	"
"	63 21	"	Ireland	"	"	s	"	"	"	1	1	"	*	7	10	39	00	"	275 00	c, t	m	50	"	"
"	64 29	"	England	"	"	m	"	"	2	7	6	"	*	7	10	45	50	"	325 00	c, t	m	100	"	"
"	65 25	"	"	"	"	s	"	"	"	2	2	"	*	7	10	42	90	"	300 00	c	m	"	"	"
Rubber	66 37	"	"	"	"	s	"	"	3	8	6	"	*	7	10	52	00	"	400 00	c, t	m	"	"	"
Trimmer	67 25	"	"	"	"	s	"	"	"	4	9	"	*	7	10	39	00	"	300 00	c	m	150	same	"
Quarryman	68 39	Canada	Ireland	"	22	m	"	"	8	20	1	"	*	7	10	45	50	"	400 00	c	m	100	"	not answered
Eye cutter	69 22	"	Scotland	"	15	s	"	"	"	6	1	"	*	7	10	45	50	"	300 00	c	m	150	better	"
Quarryman	70 25	"	England	"	8	m	"	"	1	2	2	"	*	7	10	42	90	"	300 30	c, t	m	100	same	"
Laborer	71 32	"	Ireland	"	12	m	"	"	3	12	7	"	*	10	10	45	50	"	318 50	c, t	m	100	better	\$16 00 per mo
"	72 50	"	England	"	"	s	"	"	"	5	"	"	*	7	10	40	82	"	235 74	c	m	100	same	"
Eye cutter	73 24	"	Ireland	"	23	s	"	"	8	2	2	yrs	*	7	10	41	60	"	291 20	c	m	100	"	"
Rubber	74 23	"	England	"	9	s	"	"	1	8	8	"	*	9	10	65	00	"	630 00	c, t	m	200	better	"
Quarryman	75 25	"	Scotland	"	7	s	"	"	1	7	7	"	*	7	10	45	50	"	318 50	c	m	200	"	not answered
"	76 39	"	England	"	26	m	"	"	5	2	2	"	*	6	10	41	60	"	249 60	c	m	169	not so good	\$12 00 per mo
Laborer	77 21	"	"	"	6	s	"	"	1	1	1	"	*	7	10	32	50	"	200 00	c	m	"	"	"

* What engaged at for balance of year not reported. c, t, cash and trade.

TABLE NO. 4.—Continued.

Occupation.	Line number.	How many hours for a day's work in the old country.	Amount of money at in- terest or in the bank.	If foreign born, how much money did you have on arrival in U. S.	Do you own your home. If so, its value.	If mortgaged, amount of mortgage.	Rate of interest.	Are you as well off as five years ago.	Loss of time.			If renting home, monthly rental.	If boarding, cost per week, including room.	Life insurance, how much	Do you belong to a bene- fit society.	Weekly benefit in case of sickness or accident.	Have you a sewing ma- chine.	Have you a piano.	Have you an organ.	Do you take a newspaper.			Age be- gan work.	State of health then.	State of health now.	Amount of relief rendered friends in the old country.	Amount of money fur- nished to friends for passage to U. S.
									From sickness.— (Days.)	Inability to obtain work.—(Days.)	Causes not stated. (Days.)									Daily.	Weekly.	Monthly.					
Trimmer.....	1	.....	.....	.....	\$900	.....	.....	b't'r	.....	.....	.....	.....	\$8 50	.....	yes	\$8 00	no	no	no	no	yes	no	12	good	good	.....	.....
General jobber.....	2	.....	.....	.....	no	.....	.....	b't'r	.....	.....	.....	.....	8 50	.....	no	.....	yes	no	no	no	no	no	12	.....	.....	.....	.....
Eye cutter.....	3	.....	\$500	.....	300	.....	.....	b't'r	.....	.....	.....	.....	8 00	.....	.....	.....	no	no	no	no	yes	no	14	.....	.....	.....	.....
Engineer.....	4	.....	.....	.....	no	.....	.....	yes	.....	.....	.....	.....	8 00	.....	.....	.....	no	no	no	no	no	no	13	.....	.....	.....	.....
Eye cutter.....	5	.....	.....	.....	.....	.....	.....	b't'r	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	no	no	15	.....	.....	.....	.....
Teamster.....	6	.....	.....	.....	.....	.....	.....	b't'r	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	yes	no	13	.....	.....	.....	.....
Rubber.....	7	.....	.....	.....	200	.....	.....	yes	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	no	no	16	.....	.....	.....	.....
.....	8	.....	.....	.....	300	.....	.....	no	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	no	no	10	.....	.....	.....	.....
.....	9	.....	.....	\$3	.....	.....	.....	b't'r	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	yes	no	12	.....	.....	.....	.....
Trencher.....	10	.....	.....	.....	.....	.....	.....	no	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	no	no	10	.....	.....	.....	.....
.....	11	.....	.....	.....	no	.....	.....	yes	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	no	no	13	.....	.....	.....	.....
.....	12	.....	.....	.....	800	.....	.....	.....	.....	.....	.....	.....	8 50	.....	.....	.....	.....	.....	.....	.....	no	no	11	.....	.....	.....	.....
.....	13	.....	.....	.....	no	.....	.....	.....	.....	.....	.....	.....	8 50	.....	.....	.....	.....	.....	.....	.....	no	no	12	.....	.....	.....	.....
Turner.....	14	.....	.....	100	1,000	.....	.....	no	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	yes	no	11	.....	.....	.....	\$10 00
.....	15	.....	.....	.....	.....	.....	.....	no	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	no	no	12	.....	.....	.....	.....
.....	16	.....	.....	.....	no	.....	.....	b't'r	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	no	no	12	.....	.....	.....	.....
.....	17	.....	.....	.....	100	.....	.....	no	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	yes	no	11	.....	.....	.....	.....
Laborer.....	18	.....	.....	.....	no	.....	.....	yes	.....	.....	.....	.....	8 50	.....	.....	.....	.....	.....	.....	.....	no	no	12	.....	.....	.....	.....
.....	19	.....	.....	.....	.....	.....	.....	no	.....	.....	.....	.....	8 50	.....	.....	.....	.....	.....	.....	.....	yes	no	13	.....	.....	.....	.....
.....	20	.....	.....	.....	900	.....	.....	b't'r	.....	.....	.....	.....	.....	.....	yes	8 00	yes	no	yes	no	yes	no	15	.....	.....	.....	.....
.....	21	.....	.....	.....	no	.....	.....	yes	.....	.....	.....	.....	.....	.....	no	.....	no	no	no	no	no	no	14	.....	.....	.....	.....
.....	22	.....	.....	50	.....	.....	.....	.....	.....	.....	.....	.....	8 50	.....	no	.....	no	no	no	no	no	no	10	.....	.....	.....	.....
.....	23	.....	.....	.....	.....	.....	.....	b't'r	.....	.....	.....	.....	8 00	.....	.....	.....	.....	.....	.....	.....	no	no	11	.....	.....	.....	.....
.....	24	.....	800	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	yes	no	14	.....	.....	.....	.....
.....	25	.....	.....	.....	.....	.....	.....	yes	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	no	no	16	.....	.....	.....	.....
.....	26	.....	.....	.....	.....	.....	.....	yes	.....	.....	.....	.....	2 00	.....	.....	.....	.....	.....	.....	.....	no	no	15	.....	.....	.....	.....
Quarryman.....	27	10	.....	.....	.....	.....	.....	yes	.....	.....	.....	.....	8 50	.....	.....	.....	.....	.....	.....	.....	no	no	8	.....	.....	100 00	940 00
.....	28	10	.....	10	.....	.....	.....	b't'r	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	yes	no	14	.....	.....	.....	.....
.....	29	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	no	no	15	.....	.....	.....	.....
.....	30	.....	.....	.....	2,000	.....	.....	yes	.....	.....	.....	.....	8 00	.....	.....	.....	.....	.....	.....	.....	no	no	10	.....	.....	.....	.....
.....	31	.....	.....	.....	no	.....	.....	b't'r	.....	.....	.....	.....	8 00	.....	.....	.....	.....	.....	.....	.....	yes	no	12	.....	.....	.....	.....
.....	32	.....	.....	.....	.....	.....	.....	yes	.....	.....	.....	.....	8 50	.....	.....	.....	.....	.....	.....	.....	no	no	10	.....	.....	.....	.....

TABLE No. 4.—Continued.

Occupation.	Line number.	Age.	Nativity.	Nativity of parents.	How long in U. S., if foreign born.—(Years.)	Married or single.	How many children in family.	How many attend school.	How many depend on you for support.	How many years at present occupation.	How long with present employer.—(Years.)	Number of months employed during year.	How many hours for a day's work.	Wages paid.	Annual earnings.	Are you paid cash or trade.	How often are you paid.	Amount saved during the year.	How do wages compare with former years in this country.	What occupation did you follow in the old country.	Wages received in the old country.
Eye cutter	78 26		Canada	England	24	m	5	2	6	8	8 yrs	*	10	945 50 pr m	\$325 00	c	m	\$50	same	farmer	not answered
Fireman	79 33		"	France	5	m	5	2	6	4	4	12	12	41 60 "	499 20	c	m		better	"	"
Eye cutter	80 32		"	Ireland	13	s				6	6	*	10	43 00 "	300 00	c	m	50	as good	not answ'd	"
Quarryman	81 37		"	France	19	m	6	1		11	4	*	10	45 50 "	326 00	c	m		better	farmer	"
Trencher	82 40		"	England	9	m	6	5	7	4	9	*	10	65 00 "	400 00	c	m		not so good		"
Quarryman	83 25		"	Scotland	8	m	1		22	8	8	*	10	45 50 "	350 00	c	m	50	same	"	\$18 00 per mo
"	84 3		"	Ireland	11	m	1		22	2	6	*	10	45 50 "	300 00	c	m	125	better	"	19 50
"	85 24		"	"	16	m	8	1	4	12	5	*	10	45 50 "	300 00	c	m	50	"		
"	86 13		"	England	21	s				1	1	*	10	48 00 "	300 00	c	m	100	same		
"	87 20		"	Ireland	8	s			23	3 m	3 mo	*	10	39 00 "	276 00	c	m				
"	88 27		"	Scotland	22	m	2		3	3	2 yrs	*	10	42 90 "	500 00	c	m	80	"	store-keeper	12 00 per mo
"	89 34		"	Ireland	8	m	1		3	3	1	*	10	39 00 "	300 00	c	m		better		
Eye cutter	90 35		"	"	25	s			1	3	2	*	10	42 90 "	350 00	c	m		not as good		
Teamster	91 23		"	"	22	s				3	2	*	10	39 00 "	275 00	c	m	50	same		
Laborer	92 14		"	"	16	s				1	1	*	10	39 00 "	275 00	c	m				
Turner	93 31		"	"	16	m	2	1	3	7	10	*	10	52 00 "	450 00	c	m	100	better	not answ'd	not answered
Rubber	94 36		"	Scotland	18	m	2	2	3	7	7	*	10	52 00 "	400 00	c	m	50	"	teamster	\$24 00 per mo
Quarryman	95 47		Ireland	Ireland	24	m	6	2	7	22	8	*	10	45 50 "	300 00	c	m	50	as good	farmer	11 00 "
"	96 28		"	"	8	s				8	8	*	10	45 50 "	325 00	c	m	50	same	miner	39 00 "
Foreman	97 44		"	"	20	m	5	4	6	16	13	*	10	65 00 "	520 00	c	m			not answ'd	not answered
"	98 46		"	"	20	m	3		4	19	6	*	10	53 50 "	702 00	c	m	200	"	farmer	\$6 50 per mo
Rubber	99 24		"	"	15	s				8	5	*	10	53 00 "	400 00	c	m	100	better		
Engineer	100 22		"	"	4	s				3	3	*	10	42 90 "	400 00	c	m	100	"	farmer	not answered
Rubber	101 22		"	"	15	s				4	4	*	10	52 00 "	351 00	c	m		"		
Quarryman	102 39		"	"	18	m	6	4	7	18	14	*	10	45 50 "	318 50	c	m	175	"	farmer	\$13 00 per mo
"	103 19		"	"	12	s				3	1	*	10	45 50 "	308 00	c	m		same		
Foreman	104 39		"	"	17	m	6	3	7	2	2	*	10	52 00 "	624 00	c	m		"	iron work	\$14 40 per mo
"	105 24		"	"	16	m	5	2	6	9	9	*	10	65 00 "	428 00	c	m		not so good	not answ'd	not answered
Carpenter	106 54		Scotland	Scotland	8	m	8	1	3	40	8	*	10	45 50 "	344 00	c	m		same	carpenter	\$15 60 per mo
Quarryman	107 30		"	"	7	s			2	15	6	*	10	45 50 "	300 00	c	m		better	quarryman	80 00 "
"	108 23		"	"	7	s			2	5	2	*	10	45 50 "	300 00	c	m		not so good	clerk	80 00 "
"	109 64		"	"	16	m	8		1	29	16	*	10	42 90 "	235 00	c	m				18 00

"	Blacksmith	11031	"	"	"	9	w	2	1	2	7	3	2	mo	*	7	10	45	30	"	450 00	c	m	100	better same	farmer blacksmith	not answered
"	Quarryman	11136	"	"	"	14	s	1	1	10	10	1	1	yr	10	10	10	32	50	"	325 00	c, t	m	100	better	blacksmith	\$22 50 per mo
"	Blacksmith	11217	England	"	"	3	m	6	5	6	10	3	3	ys	10	10	10	39	00	"	273 00	c	m	75	not so good	blacksmith clerk	\$22 50 per mo
"	Teamster	11345	"	"	"	2	s	1	1	1	10	3	3	"	10	10	10	45	50	"	455 00	c, t	m	75	same	"	apprentice
"		11430	"	"	"	2	s	1	1	1	10	3	3	"	10	10	10	35	63	"	275 00	c, t	m	75	same	"	"
"	Laborer	11526	Germany	"	Germany	18	m	8	8	4	10	3	3	"	10	10	10	32	50	"	325 00	c, t	m	75	"	farmer	not answered
"	"	11640	"	"	"	11	m	7	8	8	6	1	1	"	6	10	10	32	50	"	200 00	c, t	m	75	"	laborer	\$3 60 per mo
"	"	11744	"	"	"	18	m	8	8	9	7	1	1	"	7	10	10	32	50	"	225 00	c, t	m	75	"	farmer	not answered
"	"	11827	"	"	"	7	m	8	8	4	6	2	2	"	6	10	10	32	50	"	195 00	c, t	m	50	worse	teamster	\$6 00 per mo
"	"	11926	"	"	"	5	m	1	1	2	10	5	5	"	10	10	10	39	00	"	300 00	c, t	m	50	better	"	"
"	Quarryman	12045	"	"	"	19	m	6	8	7	6	16	16	"	6	10	10	45	50	"	275 00	c	m	160	not answ'd	agent	12 00
"	"	12125	"	"	Poland	7	m	2	2	3	7	1	1	"	7	10	10	44	20	"	300 00	c, t	m	160	better	farmer	not answered
"	Laborer	12218	"	"	Germany	3	s	1	1	1	7	1	1	"	7	10	10	32	50	"	227 00	c, t	m	75	not answ'd	"	"
"	"	12331	"	"	"	6	m	4	2	5	10	2	2	"	10	10	10	34	00	"	343 00	c, t	m	75	better	butcher	\$2 00 per mo
"	Eye cutter	12443	France	"	France	8	m	5	2	6	7	8	8	"	7	10	10	39	00	"	273 00	c, t	m	75	"	stone work	"

* What engaged at for balance of year not reported. c, t, cash and trade.

LABOR AND INDUSTRIAL STATISTICS.

TABLE NO. 4.—Continued.

Occupation.	Line number.	How many hours for a day's work in the old country.	Amount of money at interest or in the bank.	If foreign born, how much money did you have on arrival in U. S.	Do you own your home. If so, its value.	If mortgaged, amount of mortgage.	Rate of interest.	Are you as well off as five years ago.	Loss of time.			If renting home, monthly rental.	If boarding, cost per week, including room.	Life insurance, how much.	Do you belong to a benefit society.	Weekly benefit in case of sickness or accident.	Have you a sewing machine.	Have you a piano.	Have you an organ.	Do you take a newspaper.			Age began work.	State of health then.	State of health now.	Amount of relief rendered friends in the old country.	Amount of money furnished to friends for passage to U. S.
									From sickness — (Days)	Inability to obtain work. — (Days)	Causes not stated. — (Days)									Daily.	Weekly.	Monthly.					
Eye cutter	78				\$225			b't'r		12	\$3 00				no	\$3 00	yes	no	no	no	yes	yes	11	good	good		
Fireman	79	\$50			no			no			1 50				yes						no	no	12				
Eye cutter	80				700				8												no	no	14				
Quarryman	81				no			yes	12	24	2 70										yes	no	14				
Trencher	82																										
Quarryman	83	10								12	3 00						no						15				300 00
"	84	50						b't'r	78	12	2 50						yes						10				
"	85				500					30	3 00						no						10				
"	86				no			yes				\$3 50					no				yes	no	12				
"	87											3 50										13					
"	88				300				72	18							yes					yes	10			\$10 00	14 25
"	89	11			200					24	2 70						no					no	19				
Eye cutter	90				1,000	\$200	10	b't'r															14				
Teamster	91				no																		10				
Laborer	92							b't'r		18													10				
Turner	93				200					12							yes				yes	no	14				
Rubber	94				350					24							no					no	11				
Quarryman	95				1,200			yes		12												yes	23				
"	96				1,000					12											yes	no	16				80 00
Foreman	97				no					12	3 00						yes					yes	10				
"	98																										
Rubber	99	7			1,500			b't'r			2 70						no						10				40 00
Engineer	100				no																		13				30 00
Rubber	101	25							7												no	no	10				100 00
Quarryman	102				700	200	10	yes		6							yes				yes	no	16	not good			25 00
"	103				no												no					no	7	good			196 00
Foreman	104							b't'r			2 70			22,000							yes	no	7				
"	105				2,100					18							yes				yes	no	14			100 00	45 00
Carpenter	106				no			yes														no	14				
Quarryman	107								6	18												no	9				48 00
"	108									12											yes	yes	8				125 00

[illegible]

***Gave earnings to father.**

PART V.

STATISTICS

OF THE

GYPSUM INDUSTRY.

THE GYPSUM INDUSTRY.

“The gypsum deposits of Michigan, that are readily workable, are limited to a few localities, but fortunately they are at those points of sufficient extent and accessibility to suffice for all the demands that may be made upon them in the future. The most extensive deposits are found in the vicinity of Grand Rapids, and at Alabaster, Iosco county. At each of these localities is found a succession of thick beds of gypsum, commencing near the surface, and aggregating many feet in depth. In the quarries at Alabaster the upper gypsum bed has a thickness of 16 feet. Commencing a few miles south from Alabaster point, along the shore of Lake Huron, may be observed the plaster beds which lie next above those found at the latter locality, and which rise above the surface in bluffs, to the height of 20 to 30 feet. Near the head waters of the Aux Gres river, extending west from Alabaster for nearly 40 miles, gypsum is found near the surface of the soil; also to the north and to the south, but it is at Grand Rapids that the production for consumption is found. Here the deposit is found to the south from the city a distance of about six miles, extending beyond the village of Grandville, and lying on both sides of the Grand river and beneath it, extending over an area of eight or ten square miles, and lying from two feet to seventy feet beneath the surface. In this region the upper superficial bed has a thickness of six to eight feet, and lies directly beneath the soil; then occurs a seam of soft slate about one foot in thickness, followed by a bed of pure gypsum twelve feet in thickness. The gypsum at Grand Rapids or Alabaster does not vary materially in appearance or quality. It is found of various shades of color, gray, brown, red, yellow, white and mottled like castile soap. The prevailing colors are white, rose colored and gray. Gypsum is found wherever sulphuric acid comes in contact with carbonate of lime, and is also formed by the mutual decomposition of sulphuret of iron and limestone.

In the arts it is known as plaster of paris. Alabastine is a pure granular form of this rock; pure alabastine is of a delicate white color.”—From Report of Commissioner of Mineral Statistics, 1881.

The gypsum, when quarried, is broken into pieces. At the mill the rock is thrown into a crusher, which prepares it for the pulverizer. From the pulverizer it is conveyed to the hopper of the grinding stone—which is just the same as a flouring mill stone—where it is ground into fine particles suitable for land plaster or stucco, for which purposes the gypsum is used. The plaster used for making stucco is conveyed to the huge kettles where it is converted into stucco by calcination or heating and boiling.

All of the gypsum companies in the United States do business through a pooling system which is known as the Western Plaster Agency, with headquarters at No. 100 Monroe street, Grand Rapids. Each company sells all of its product through this agency. The agency consists of the Grand Rapids Plaster Co., F. Godfrey & Bro., Noble & Co., Alabastine Co., of Grand Rapids, Wyoming Plaster Co., of Grandville, B. F. Smith's quarry, Alabaster, Iosco Co., Fort Dodge Gypsum Stucco Co. and Iowa Plaster Co., of Fort Dodge, Iowa, and Marsh & Co., of Sandusky, Ohio.

The quarry of F. Godfrey & Bro. is located on the east side of Grand river, $1\frac{1}{2}$ miles south of Grand Rapids. The work of quarrying is carried on only about $2\frac{1}{2}$ months in the summer and the grinding is done in the winter. The gypsum is under about 20 feet of surface, which is stripped, making an open quarry. Twenty-five men are employed. Pay cash weekly; no store, no dwellings.

The Grand Rapids Plaster Co. has beds in the town of Walker, two miles west of the city. The beds are from 50 to 75 feet under the surface, and are reached by shafts from the base of the bluffs, extending to the mine. Thirty men are employed. The quarry work and grinding are both conducted in the winter and summer. The company own the dwellings but charge no rent. No store, men are paid cash every week. The company has an investment of \$125,000, and has been in operation 32 years. For the year ending June 1, 1888, 7,000 tons of plaster was produced. Total wages paid, \$5,000; other expenses than labor, \$800.

Noble & Co. have quarries in the township of Walker. Employ 50 men, pay cash once a month, no store, occupy company's dwellings but pay no rent. The quarry work is done under ground, which is continued the year round. This company has been in operation 9 years and has a capital of \$72,500. For the year ending July 1, 1888, 40,000 barrels of plaster were produced.

The Alabastine Co. operates quarries on west side of the river, three miles from the city. Employ 50 men. Is a stripping quarry; gypsum from 12 to 14 feet below the surface. Pay cash every week; no store; company own dwellings but charge no rent. The company has \$40,000 capital and has been working 6 years, and for the year ending July 1, 1888, produced 8,000 tons of plaster, valued at \$24,000. Aggregate wages paid for the year, \$19,248.

Loren Day, proprietor of the Wyoming Mills at Grandville, employs 20 men. The surface is stripped for 10 feet. Pay cash monthly; no store. Do not own tenant houses. Work in the quarry is carried on only in the summer, but the grinding or mill work continues both summer and winter. Mr. Day has an investment of \$60,000, has been in operation 12 years and produced 6,000 tons of plaster last year.

B. F. Smith, proprietor of the Western Plaster Works at Alabaster, Iosco county, owns 2,000 acres of land. He works a stripping quarry, the gypsum underlying 10 feet of surface. Employment is given to about 60 men who rent their dwellings of Smith and trade at his store. At the end of the month they are paid the balance due them in cash. The men receive a little higher wages than at the Grand Rapids quarries, but work longer hours. Of the 30 canvassed in this quarry one man works 10 hours a day, twenty-four 11 hours, and one each 12, 13, 14 and 15 hours.

In the gypsum industry we secured a total canvass of 193 names, from which we give the following summary: Nationality: Two Englishmen, 55 Hollanders, 43 Americans, 10 Swedes, 10 Canadians, 21 Irishmen, 44 Germans, 1 Austrian, 1 Belgian, 1 Dane and 5 Finns; of those born in the U. S., 19 are of American parentage, 17 Irish, 5 Holland, 1 Poland and 1 France. Occupations: One carpenter, 1 superintendent, 3 firemen, 2 water boys, 1 watchman, 1 driller, 6 millers, 6 engineers, 8 mill hands, 3 stucco boilers, 21 teamsters, 64 laborers, 2 kalsominers, 4 blacksmiths, 7 foremen, 5 coopers, 57 miners and 1 dock agent. The men work for the following wages: One 50 cents a day, three \$1, one \$1.10, eighty-three \$1.25, one \$1.32, three \$1.38, six \$1.50, one \$1.54, two \$1.75, five \$2, one \$2.25, two \$2.50, one \$2.80, two \$3, one \$3.20, two by piece-work, forty-two at \$32.50 a month, six \$36.83, nineteen \$39, one \$42.25, four \$43.33, one \$43.83, three \$45.50, one \$47.66 and one \$52. Nationality by occupations: Firemen, 3 Americans, 2 Irishmen, 1 Swede, 1 Hollander; watchman, 1 American; driller, 1 Hollander; millers, 1 Dane, 2 Irishmen, 1 Swede and 1 German; engineers, 1 Irishman, 2 Americans and 1 Hollander; stucco boilers, 3 Hollanders; teamsters, 1 Irishman, 6 Swedes, 4 Hollanders, 6 Americans; miners, 5 Americans, 7 Hollanders, 27 Germans, 9 Irishmen, 5 Finlanders, 1 Englishman and 1 Austrian; laborers, 12 Germans, 5 Irishmen, 4 Canadians, 12 Americans, 30 Hollanders and 1 Englishman; kalsominers, 1 Irishman and 1 American; blacksmiths, 2 Hollanders, 1 Irishman and 1 German; coopers, 1 Belgian, 3 Americans and 1 Canadian; dock agent, 1 German; carpenter, 1 American; superintendent, 1 American; water boys, 1 American and 1 Hollander; fireman, 1 Hollander, 1 German and 1 American. One hundred and thirty are married and 63 single. Fourteen have no children and 116 have a total of 447 children. The nationality of those having no children are, 5 Americans, 2 Hollanders, 2 Irishmen, 2 Canadians, 1 German, 1 Belgian and 1 Swede. There are 37 children by American parents and 410 by foreign parents. The number attending school is 286. The number depending upon their parents for support is 301. One hundred and sixty-four men work 10 hours a day, twenty-four 11, two 12 and one each 13, 14

and 15. Number of months worked during the year: One man worked one month, 4 men two months, 5 three, 5 six, 2 seven, 12 eight, 25 nine, 28 ten, 10 eleven and 100 twelve. Loss of time from sickness: One man 5 days, three 6, two 12, three 13, one 18, one 24, five 26, one 36, one 48, three 52 and one 78. Loss of time from inability to obtain work: Two 12 days, one 13, one 18, five 26, three 36, thirteen 52, one 39, one 60, one 66, one 68, fourteen 78, one 90, one 98, three 104 and one 156. Loss of time from causes not stated: One man lost 7 days, one 12, one 14, one 18, two 24, five 26, one 36, one 44, one 47, eight 52, one 65, one 75, two 78, one 104, one 182. Ages began work: One at 7 years, two 9, twenty 10, six 11, fifty 12, fifteen 13, forty-eight 14, thirty-two 15, twelve 16, two 17, two 18, one 19, one 20 and two did not answer. Number of years in the U. S. of foreign-born: Three 2 months, four 3 months, three 6 months, eight 1 year, seven 2, four 3, seven 4, ten 5, sixteen 6, seventeen 7, eleven 8, two 9, ten 10, six 11, two 13, two 14, five 15, two 16, two 18, three 20, four 21, five 22, one 23, one 24, two 25, one 28, three 30, one 33, one 35, one 36, one 38, one 39, and two 40. Occupation followed in the old country: Two salesmen, 82 farmers, 20 laborers, 4 blacksmiths, 4 teamsters, 3 gardeners, 2 ship carpenters, and 1 cabinet maker, weaver, carpenter, miller, warden, miner, moulder and dike worker. Wages in the old country, per month: Two at \$6.50, four \$7.80, eight \$10.40, one \$12, five \$13, one \$14, six \$15.60, one \$18, three \$19.50, one \$20, one \$26. By the day: Fourteen at 25 cents, eighteen 30 cts., two 35 cts., one 38 cts., two 40 cts., nineteen 50 cts., one 55 cts., one 58 cts., two 60 cts., four 65 cts., one 85 cts., six 75 cts. and one \$1. Hours for a day's work in the old country: Fifty-one worked 10 hours, eleven 11, fifty-six 12, one 13, one 14 and one 15. Number owning homes and the value: One \$100, six \$400, three \$500, one \$530, eight \$600, one \$700, three \$800, eight \$1,000, one \$1,200, one \$1,500, one \$1,600, one \$2,000, one \$2,500 and two \$5,000; total \$39,230. Nineteen are mortgaged for a total sum of \$5,827, as follows: Two for \$100 each, 4 for \$200, two \$250, three \$300, three \$400, one \$600, two \$700, one \$187, and one \$40. Three pay 8 per cent interest and sixteen 7 per cent. For rent of dwellings the men pay: Three at \$1.25 per month, three \$2, one \$2.25, one \$2.50, nine \$3, fifteen \$4, three \$4.50, ten \$5, seven \$6, one \$10 and 33 have rent free. Of those boarding two pay \$2 per week; four \$2.50, nineteen \$3, twenty-eight \$3.50, one \$4 and one \$5. Total annual earnings, \$72,834. The children of 3 families earn \$450. Eight men sent \$600 to pay passage money of relatives to this country. Fifteen sent \$1,800 for the assistance of friends in the old country. Eighty-three men saved a total sum of \$7,065, as follows: Eleven \$25, five \$40, twenty-two \$50, three \$30, two \$60, ten \$75, one \$80, one \$90, thirteen \$100, two \$125, one \$150,

one \$160, seven \$200, two \$250 and two \$300. Thirty-four foreigners had \$2,400 upon arrival in this country, as follows: One \$7, one \$8, two \$10, one \$12, one \$13, two \$15, one \$20, six \$25, four \$30, two \$35, two \$45, one \$50, one \$90, three \$100, one \$150, one \$170, two \$200, one \$300 and one \$400. Ninety said that they were as well off as five years ago, 49 said that they were better off and 7 said that they were not as well off. The 7 gave the following reasons for not being as well off: One, less wages, 2 less work, 2 larger families, 1 sickness, and one poor health. Sixty-five said that wages were about the same as in previous years in this country, 2 said that they were better and 74 said that they were lower, while 52 did not answer. One hundred and fifty-nine said that their health was good, 8 fair and 10 poor. One man has a life insurance of \$50, one \$82, two \$100, one \$500, one \$550, six \$600, one \$1,000, two \$2,000, one \$3,000 and one \$6,500. Twenty-four belong to a benefit society and 164 do not. Sixteen receive \$3, per week benefit in case of accident or sickness, four \$5, one \$10, two \$15 and one the sum not stated. One man owns a piano, 37 own organs and 72 own sewing machines. Sixteen take a daily paper, 93 a weekly and 4 a monthly.

TABLE NO. 5.—Statistics of the Gypsum Industry.

Occupation.	Line number.	Age.	Nativity.	Nativity of parents.	How long in U. S., if foreign born.—(Years.)	Married or single.	How many children in family.	How many attend school.	How many depend on you for support.	How many years at present occupation.	How long with present employer.—(Years.)	Number of months employed during year.	How many hours for a day's work.	Wages paid.	Annual earnings.	Are you paid cash or trade.	How often are you paid.	Amount saved during the year.	How do wages compare with former years in this country.	What occupation did you follow in the old country.	Wages received in the old country.
Miners' foreman	132	U. S.	U. S.	Ireland	...	m	1	1	4	15	2 yrs	12	10	\$52 00 pr m	\$24 00	c	w	...	lower	...	...
Watchman	233	"	"	U. S.	...	m	4	4	1	8	4	12	10	30 00 "	468 00	c	w	\$40	not answ'd	farmer	\$15 60 per mo
Driller	337	Holland	Holland	Holland	8	m	4	4	6	10	1	12	10	32 50 "	390 00	c	w	75	lower	laborer	15 60 "
Miller	449	"	"	"	18	m	5	3	4	10	10	12	10	30 00 "	468 00	c	w	100	same	cabinet maker	not answ'd
"	537	Sweden	Sweden	Sweden	7	m	2	1	3	8	3	12	10	30 00 "	468 00	c	w	...	...	...	...
Engineer	630	Canada	Canada	Ireland	14	m	2	...	8	5	2	12	10	45 50 "	546 00	c	w	...	lower	laborer	"
"	723	Holland	Holland	Holland	15	m	...	...	1	3	3	12	10	30 00 "	468 00	c	m	100	same	...	...
Mill man	828	U. S.	U. S.	"	...	m	2	...	3	1	1	12	10	32 50 "	390 00	c	w	...	lower	farmer	19 50 per mo
"	934	Holland	Holland	"	...	m	3	2	7	5	1	12	10	32 50 "	390 00	c	w	...	lower	laborer	26 00 "
Stucco boiler	1045	"	"	"	...	m	7	3	8	9	1	12	10	45 50 "	546 00	c	w	...	...	...	...
"	1156	"	"	"	12	m	7	2	3	...	6 mo	12	10	45 50 "	546 00	c	m	125	same	"	13 00 "
Teamster	1217	"	"	"	4	s	...	...	...	1	4	8	10	32 50 "	250 00	c	w	...	not answ'd	farmer	6 50 "
"	1320	"	"	"	10	s	...	...	...	3	4	9	10	32 50 "	232 50	c	w	40	lower	...	...
"	1426	"	"	"	22	s	1	...	2	12	2 yrs	9	10	32 50 "	232 50	c	w	...	"	...	...
"	1528	"	"	"	16	s	...	...	...	1	1	11	10	32 50 "	357 50	c	m	...	...	...	...
"	1630	U. S.	U. S.	U. S.	...	m	2	...	1	5	3 mo	8	10	32 50 "	250 00	c	w	25	"	...	...
"	1740	"	"	"	...	m	...	...	2	10	6 wks	8	10	32 50 "	200 00	c	w	...	"	...	...
"	1815	"	"	"	...	s	...	...	...	1	3 mo	9	10	32 50 "	232 50	c	w	...	not answ'd	...	...
"	1920	"	"	Ireland	...	s	...	...	...	2	1 yr	8	10	32 50 "	200 00	c	w	...	lower	...	...
"	2024	"	"	"	...	s	...	...	...	3	4 mo	8	10	32 50 "	200 00	c	w	...	"	...	...
Miner	2142	Holland	Holland	Holland	9	m	6	4	7	5	1 yr	11	10	32 50 "	357 50	c	w	...	...	farmer	15 60 per mo
"	2248	"	"	"	6	m	4	2	4	6	2	10	10	32 50 "	325 00	c	w	50	"	laborer	15 60 "
"	2319	"	"	"	1	s	...	...	...	1	1	10	10	32 50 "	325 00	c	w	...	"	farmer	10 40 "
"	2422	Ireland	Ireland	Ireland	4	s	...	...	...	2	6 mo	12	10	32 50 "	390 00	c	w	...	not answ'd	...	...
"	2538	"	"	"	10	m	5	4	6	4	1 yr	10	10	32 50 "	325 00	c	w	50	lower	"	7 80 "
"	2624	U. S.	U. S.	U. S.	...	s	...	...	...	9	2 mo	8	10	32 50 "	300 00	c	w	...	"	...	6 50 "
"	2732	"	"	"	...	s	...	...	...	5	2 yrs	12	10	32 50 "	390 00	c	w	...	"	...	...
"	2823	England	England	England	4	s	...	...	...	2	3 mo	12	10	32 50 "	390 00	c	w	...	not answ'd	farmer	10 40 per mo
"	2921	Sweden	Sweden	Sweden	3	s	...	...	...	1	1 yr	9	10	32 50 "	232 50	c	w	25	"	laborer	10 40 "
Laborer	3032	Holland	Holland	Holland	9	m	4	4	5	8	8	12	10	32 50 "	390 00	c	m	25	lower	farmer	13 00 "
"	3130	"	"	"	21	m	1	1	2	11	11	12	10	32 50 "	390 00	c	m	50	"	...	...
"	3234	"	"	"	10	m	5	5	6	10	10	12	10	32 50 "	390 00	c	m	...	"	farmer	15 60 per mo
"	3324	"	"	"	5	s	...	...	...	5	6 mo	12	10	32 50 "	390 00	c	m	50	same	...	10 40 "

Age	Sex	Marital Status	Country of Birth	Duration in U.S.	Years in U.S.	Occupation	Wage	Remarks
34	M	Married	Ireland	10	10	Blacksmith	\$1.00	
35	M	Married	Ireland	10	10	Blacksmith	\$1.00	
36	M	Married	Ireland	10	10	Blacksmith	\$1.00	
37	M	Married	Ireland	10	10	Blacksmith	\$1.00	
38	M	Married	Ireland	10	10	Blacksmith	\$1.00	
39	M	Married	Ireland	10	10	Blacksmith	\$1.00	
40	M	Married	Ireland	10	10	Blacksmith	\$1.00	
41	M	Married	Ireland	10	10	Blacksmith	\$1.00	
42	M	Married	Ireland	10	10	Blacksmith	\$1.00	
43	M	Married	Ireland	10	10	Blacksmith	\$1.00	
44	M	Married	Ireland	10	10	Blacksmith	\$1.00	
45	M	Married	Ireland	10	10	Blacksmith	\$1.00	
46	M	Married	Ireland	10	10	Blacksmith	\$1.00	
47	M	Married	Ireland	10	10	Blacksmith	\$1.00	
48	M	Married	Ireland	10	10	Blacksmith	\$1.00	
49	M	Married	Ireland	10	10	Blacksmith	\$1.00	
50	M	Married	Ireland	10	10	Blacksmith	\$1.00	
51	M	Married	Ireland	10	10	Blacksmith	\$1.00	
52	M	Married	Ireland	10	10	Blacksmith	\$1.00	
53	M	Married	Ireland	10	10	Blacksmith	\$1.00	
54	M	Married	Ireland	10	10	Blacksmith	\$1.00	
55	M	Married	Ireland	10	10	Blacksmith	\$1.00	
56	M	Married	Ireland	10	10	Blacksmith	\$1.00	
57	M	Married	Ireland	10	10	Blacksmith	\$1.00	
58	M	Married	Ireland	10	10	Blacksmith	\$1.00	
59	M	Married	Ireland	10	10	Blacksmith	\$1.00	
60	M	Married	Ireland	10	10	Blacksmith	\$1.00	
61	M	Married	Ireland	10	10	Blacksmith	\$1.00	
62	M	Married	Ireland	10	10	Blacksmith	\$1.00	
63	M	Married	Ireland	10	10	Blacksmith	\$1.00	
64	M	Married	Ireland	10	10	Blacksmith	\$1.00	
65	M	Married	Ireland	10	10	Blacksmith	\$1.00	
66	M	Married	Ireland	10	10	Blacksmith	\$1.00	
67	M	Married	Ireland	10	10	Blacksmith	\$1.00	
68	M	Married	Ireland	10	10	Blacksmith	\$1.00	
69	M	Married	Ireland	10	10	Blacksmith	\$1.00	
70	M	Married	Ireland	10	10	Blacksmith	\$1.00	
71	M	Married	Ireland	10	10	Blacksmith	\$1.00	
72	M	Married	Ireland	10	10	Blacksmith	\$1.00	
73	M	Married	Ireland	10	10	Blacksmith	\$1.00	
74	M	Married	Ireland	10	10	Blacksmith	\$1.00	
75	M	Married	Ireland	10	10	Blacksmith	\$1.00	
76	M	Married	Ireland	10	10	Blacksmith	\$1.00	
77	M	Married	Ireland	10	10	Blacksmith	\$1.00	
78	M	Married	Ireland	10	10	Blacksmith	\$1.00	

TABLE NO. 5.—Continued.

Occupation.	Line Number.	How many hours for a day's work in the old country.	Amount of money at interest or in the bank.	If foreign born, how much money did you have on arrival in U. S.	Do you own your home. If so, its value.	If mortgaged, amount of mortgage.	Rate of interest.	Are you as well off as five years ago.	Loss of time.			If renting home, monthly rental.	If boarding, cost per week, including room.	Life insurance, how much.	Do you belong to a benefit society.	Weekly benefit in case of sickness or accident.	Have you a sewing machine.	Have you a piano.	Have you an organ.	Do you take a newspaper.			Age began work.	State of health then.	State of health now.	Amount of relief rendered friends in the old country.	Amount of money furnished to friends for passage to U. S.
									From sickness.—(Days.)	Inability to obtain work.—(Days.)	Causes not stated.—(Days.)									Daily.	Weekly.	Monthly.					
Miners' foreman	1	10	\$600		\$500			yes							no		no	no	no	no	14	good	good				
Watchman	2	10	120		no			"			\$4 50				"		yes	"	"	"	14	good	good				
Driller	3	10			600			"							"		"	"	"	"	14	"	"				
Miller	4	10	200	\$30	no			b't'r							"		no	"	"	"	12	"	"				
"	5	10													"			"	"	"							
Engineer	6				"			yes							"		yes	"	"	"	18	"	"				
"	7				800			b't'r							"		"	"	"	"	15	"	"				
Mill man	8				no			yes			5 00				"		"	"	"	"	12	"	"				
"	9	10			"			yes			4 50				"		no	"	"	"	12	"	"				
Stucco boiler	10	10			"			yes			6 00		\$100		"		yes	"	"	"	10						
"	11	10		25	1,500			b't'r							"		yes	"	"	"	15	good	good	\$30			
Teamster	12	10	100		no			yes	104			\$3 00			"		no	"	"	"	15	good	good				
"	13				"			"	78			8 00			"		no	"	"	"	15	"	"				
"	14		50		"			"	78			4 00			"		yes	"	"	"	14	"	"				
"	15				"			"	28			3 00			"		no	"	"	"	14	"	"				
"	16		100		"			"			6 00				"		yes	"	yes	"	15	"	"				
"	17		50		"			"			6 00				"		no	"	no	"	12	"	"				
"	18				"			"				3 00			"		no	"	"	"	14	"	"				
"	19				"			yes				3 50			"		"	"	"	"	14	"	"				
"	20				"			"				3 50			"		"	"	"	"	14	"	"				
Miner	21	10			"			"			6 00				"		yes	"	"	"	14	"	"				
"	22	10			"			"			5 00				"		"	"	"	"	14	"	"				
"	23	10			"			yes				3 50			"		no	"	"	"	12	"	"				
"	24	10			"			"				3 50			"		yes	"	"	"	13	"	"				
"	25	10			"			"			5 00				"		yes	"	"	"	12	"	"				
"	26		150		"			"				3 00			"		no	"	"	"	14	"	"				
"	27				"			"				3 50			"		"	"	"	"	14	"	"				
"	28	10			"			"				3 50			"		"	"	"	"	12	"	"				
"	29	10			"			"				3 50			"		"	"	"	"	16	"	"				
Laborer	30	10	50		"			yes			4 00				"		yes	"	"	"	16	"	"				
"	31				600	\$100	7	"							"		"	"	"	"	15	"	"				
"	32	10			no			"							"		"	"	"	"	15	"	"				
"	33	10	120					"				8 00			"		no	"	"	"	13	"	"				

TABLE No. 5.—Continued.

Occupation	Line number.	Age.	Native.	Native of parents.	How long in U. S., if foreign born.—(Years.)	Married or single.	How many children in family.	How many attend school.	How many depend on you for support.	How many years at present occupation.	How long with present employer.—(Years.)	Number of months employed during year.	How many hours for a day's work.	Wages paid.	Annual earnings.	Are you paid cash or trade.	How often are you paid.	Amount saved during the year.	How do wages compare with former years in this country.	What occupation did you follow in the old country.	Wages received in the old country.
Laborer	79	23	Holland	Holland	5	m	1	1	22	22 m	2 mo	6	10	\$1 25	\$232 50	c	w	.....	lower	farmer	90 40 per day
"	80	54	"	"	2 m	m	.....	.....	.....	"	2	2	10	1 25	65 00	c	w	.....	.....	"	50
"	81	21	"	"	"	s	2	1	.....	2	2	3	10	1 25	65 00	c	w	.....	not ans'w'd	"	80
"	82	35	"	"	3 m	s	.....	.....	.....	3 m	3	8	10	1 25	232 50	c	w	.....	.....	"	40
"	83	38	"	"	3 m	s	.....	.....	.....	3 m	3	8	10	1 25	97 50	c	w	.....	.....	dyke worker	75
"	84	25	"	"	6 m	m	8	.....	4	4 m	6	6	10	1 25	195 00	c	m	.....	not ans'w'd	farmer	40
"	85	19	"	"	12	s	.....	.....	.....	2	2 yrs	10	10	1 25	325 00	c	m	.....	.....	not ans'w'd	not answered
"	86	50	"	"	20	s	4	4	.....	20	10	12	10	1 25	390 00	c	m	.....	.....	not ans'w'd	not answered
"	87	23	"	"	8	s	.....	.....	.....	8	8	11	10	1 25	357 50	c	m	.....	lower	farmer	50 per day
"	88	38	"	"	16	m	5	5	.....	8	8	12	10	1 25	390 00	c	m	.....	.....	farmer	50 per day
"	89	22	"	"	6 m	s	.....	.....	.....	6 m	6 mo	6	10	1 25	195 00	c	m	.....	lower	"	40
"	90	45	"	"	15	m	7	4	.....	1 w	1 w'k	11 1/2	10	1 25	373 75	c	m	.....	same	"	40
"	91	38	"	"	5	m	8	1	.....	2	2 yrs	12	10	1 25	390 00	c	m	.....	.....	"	50
"	92	38	"	"	8	m	4	2	.....	8	8	12	10	1 25	390 00	c	m	.....	.....	"	40
"	93	48	"	"	23	s	.....	.....	.....	6	6	9	10	1 25	292 50	c	m	.....	lower	"	75
"	94	40	"	"	15	m	4	3	5	11 11	"	12	10	1 25	390 00	c	m	.....	.....	"	50
"	95	17	U. S.	"	.....	s	.....	.....	.....	2	2	12	10	1 25	390 00	c	m	.....	not ans'w'd	"	.....
"	96	27	"	"	.....	s	.....	.....	.....	5	5	9	10	1 25	292 00	c	m	.....	.....	.....	.....
Mill hand	97	40	Germany	Germany	26	m	8	6	1	15 15	"	12	11	39 00 pr m	408 00	c	w	.....	same	farmer	58 per day
Dock agent	98	50	"	"	25	m	7	4	6	6 15	"	11 1/2	11	39 00	448 50	c	w	.....	less	gardener	86
Cooper	99	30	Belgium	Belgium	12	m	.....	.....	1	10 4	"	10	10	piece work	600 00	c	w	.....	better	.....	.....
Miller	100	25	Denmark	Denmark	8	m	2	2	8	10 1	"	12	12	43 33 pr m	519 96	c	w	.....	same	mill	18 00 per mo
Laborer	101	30	Canada	Canada	10	m	1	.....	2	1	3	12	14	47 66	571 92	c	w	.....	.....	laborer	not answered
"	102	23	"	"	2	s	.....	.....	.....	6 m	6 mo	12	15	42 25	507 00	c	w	.....	.....	not ans'w'd	.....
Mill hand	103	40	"	"	15	m	6	4	7	4 4	4 yrs	11 1/2	11	39 00	438 75	c	w	.....	.....	"	.....
"	104	45	"	Ireland	.....	m	1	.....	2	6 10	"	12	11	43 33	519 96	c	w	.....	less	"	.....
Carpenter	105	45	U. S.	U. S.	.....	m	4	4	5	10 3	"	12	11	39 00	408 00	c	w	.....	not ans'w'd	"	.....
Mill hand	106	20	"	"	.....	s	.....	.....	.....	3	2	7	11	39 00	350 00	c	w	.....	same	.....	.....
"	107	27	"	"	.....	s	.....	.....	.....	10 6	"	10	11	39 00	400 00	c	w	.....	.....	.....	.....
"	108	27	"	"	.....	s	.....	.....	.....	10 6	"	10	11	39 00	400 00	c	w	.....	.....	.....	.....
Foreman	109	31	"	"	.....	s	.....	.....	.....	1	3	12	11	43 33	526 96	c	w	.....	less	.....	.....
Teaming	110	19	"	"	.....	m	.....	.....	2	2 2	"	12	11	39 00	408 00	c	w	.....	not ans'w'd	.....	.....
Laborer	111	46	Ireland	Ireland	28	s	8 15	"	10	11	39 00	390 00	c	w	less	gardener	40 per day

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Miner	112 50	"	"	10	m	2	2	2	6	8	"	* 9	11	36 88	"	piece work	360 00	o	w	25	same	farmer	65	
Cooper	113 25	U. S.	"	30	m	7	6	1	8	8	"	* 9	13	43 88	"	pr m	600 00	o	w	100	not answ'd	not answ'd	not answered	
Engineer	114 46	Ireland	"	20	s	---	---	---	10	10	"	* 9	11	86 88	"	"	381 47	o	w	90	less	warden	14 00 per mo	
Miner	115 15	Finland	Finland	10	s	---	---	---	6	6	"	* 10	11	86 88	"	"	368 80	o	w	75	same	not answ'd	not answered	
"	116 32	"	"	8	m	6	---	---	6	6	"	* 9	11	86 88	"	"	350 00	o	w	---	"	miner	65 per day	
"	117 50	"	"	4	m	6	---	---	2	6	mo	* 10	11	86 88	"	"	365 00	o	w	75	less	ship carpenter	75 "	
"	118 40	"	"	6	s	---	---	---	6	6	"	* 6	11	86 88	"	"	220 00	o	w	---	same	"	75 "	
Teamster	119 35	Sweden	Sweden	8	s	---	---	---	5	3	yrs	* 10	11	89 00	"	"	390 00	o	w	50	not answ'd	laborer	65 "	
"	120 30	"	"	5	s	---	---	---	4	6	mo	* 12	11	89 00	"	"	468 00	o	w	75	same	clerk	18 00 per m o	
"	121 27	"	"	4	m	---	---	---	2	8 1/2	yrs	* 12	11	89 00	"	"	468 00	o	w	250	"	farmer	not answered	
"	122 83	"	"	1	s	---	---	---	1	1	"	* 12	11	89 00	"	"	468 00	c, t	m	75	"	"	not answered	
"	123 26	"	"	12	m	3	2	4	1	5	"	* 11 1/2	11	89 00	"	"	448 50	c, t	w	100	"	teamster	65 per day	
"	124 30	"	"	10	m	4	---	---	1	6	"	* 11	11	89 00	"	"	429 00	o	w	75	"	gardener	60 "	
"	125 50	"	"	10	m	3	1	4	1	8	"	* 12	11	48 88	"	"	519 96	o	w	75	less	farmer	60 "	
Foreman	126 36	"	"	18	m	4	1	5	18	18	"	* 12	10	2 00	pr d	"	624 00	o	w	---	about same	blacksmith	50 per day	
Mine foreman	127 36	Ireland	Ireland	7	m	5	1	6	6	6	"	* 12	10	1 54	"	"	480 48	o	w	---	about same	farmer	1 00 "	
Engineer	128 51	U. S.	France	40	m	4	2	3	28	27	"	* 6	10	1 25	"	"	890 00	o	w	---	"	laborer	50 "	
Miller	129 60	Ireland	Ireland	30	m	4	4	1	31	31	"	* 12	10	1 50	"	"	890 00	o	w	---	"	---	---	---
Kalsominer	130 45	"	"	38	m	9	6	1	26	26	"	* 11 1/2	10	2 25	"	"	672 75	o	w	---	better	farming	80 per day	
Blacksmith	131 65	"	"	38	m	---	---	---	49	7	"	* 12	10	1 50	"	"	468 00	o	w	---	smaller now	blacksmith	50 per day	
Teamster	132 35	Canada	Canada	7	m	---	---	---	1	1	"	* 12	10	1 54	"	"	480 48	o	w	---	about same	farmer	1 00 "	
Fireman	133 43	Prussia	Poland	7	m	5	1	6	6	6	"	* 12	10	1 25	"	"	890 00	o	w	---	"	laborer	50 "	
"	134 40	U. S.	U. S.	---	s	6	8	2	2	2	"	* 12	10	1 25	"	"	890 00	o	w	---	"	---	---	---
Laborer	135 27	Ireland	Ireland	13	s	---	---	---	2	6	"	* 11	10	1 25	"	"	357 50	o	w	---	"	farming	25 "	
"	136 18	U. S.	"	---	s	---	---	---	1	3	mo	* 11	10	1 00	"	"	286 00	o	w	---	not answ'd	---	---	---
"	137 34	"	"	---	m	3	3	4	19	6	"	* 7	10	1 25	"	"	227 50	o	w	---	lower	---	---	---
"	138 34	"	U. S.	---	m	4	8	6	2	2	wks	* 9	10	1 25	"	"	292 50	o	w	25	"	---	---	---
"	139 34	"	"	---	m	3	2	4	2	3	mo	* 8 1/2	10	1 25	"	"	276 25	o	w	---	"	---	---	---
"	140 29	"	Ireland	---	s	---	---	---	1	12	6 yrs	* 12	10	1 25	"	"	390 00	o	w	---	about same	---	---	---
"	141 37	Prussia	Poland	6	m	5	---	---	6	6	"	* 12	10	1 25	"	"	390 00	o	w	---	"	farming	50 per day	
"	142 34	"	"	7	m	5	---	---	6	4	"	* 12	10	1 25	"	"	390 00	o	w	---	"	"	"	"
"	143 40	"	"	7	m	3	1	4	6	6	"	* 12	10	1 25	"	"	390 00	o	w	---	"	laborer	50 "	
Miner	144 36	"	"	5	m	7	2	8	5	5	"	* 11 1/2	10	1 35	"	"	408 65	o	w	---	"	teamster	50 "	
"	145 39	"	"	8	m	5	2	8	7	7	"	* 12	10	1 38	"	"	480 56	o	w	---	"	farming	50 "	
"	146 30	"	"	2	m	2	---	---	3	2	mo	* 12	10	1 25	"	"	390 00	o	w	---	don't know	laborer	50 "	
"	147 21	"	"	3	s	---	---	---	3	2	yrs	* 12	10	1 25	"	"	390 00	o	w	---	"	farming	50 "	
"	148 22	"	"	5	s	---	---	---	4	2	mo	* 8	10	1 25	"	"	290 00	o	w	---	"	carpenter	25 "	
"	149 38	"	"	2	m	4	1	5	2	4	"	* 2	10	1 25	"	"	65 00	o	w	---	about same	laborer	25 "	
"	150 35	"	"	1	m	3	---	---	1	1	yr	* 12	10	1 25	"	"	390 00	o	w	---	don't know	farming	88 "	
"	151 50	"	"	12	m	5	1	5	12	12	yrs	* 12	10	1 25	"	"	390 00	o	w	25	about same	teamster	25 "	
Gen. foreman	152 36	Holland	Holland	21	m	6	4	8	14	14	"	* 12	10	8 00	"	"	936 00	o	m	800	same	---	---	---
Water boy	153 13	"	"	7	s	---	---	---	1	1	"	* 12	10	50	"	"	156 00	o	m	---	lower	blacksmith	1 00 per day	
Blacksmith	154 50	"	"	14	m	2	---	3	34	8	"	* 12	10	1 50	"	"	468 00	o	m	125	"	farmer	50 "	
Teamster	155 32	"	"	7	m	7	2	8	7	3	"	* 12	10	1 25	"	"	390 00	o	m	---	"	---	---	---
"	156 40	"	"	8	m	6	4	7	7	6	"	* 11	10	1 25	"	"	357 50	o	m	60	"	---	---	---

LABOR AND INDUSTRIAL STATISTICS.

TABLE NO. 5.—Continued.

Occupation.	Line number.	How many hours for a day's work in the old country.	Amount of money at interest or in the bank.	If foreign born, how much money did you have on arrival in U. S.	Do you own your home, If so, its value.	If mortgaged, amount of mortgage	Rate of interest.	Are you as well off as five years ago.	Loss of time.			If renting home, monthly rental.	If boarding, cost per week, including room.	Life insurance, how much.	Do you belong to a benevolent society.	Weekly benefit in case of sickness or accident.	Have you a sewing machine.	Have you a piano.	Have you an organ.	Do you take a newspaper.			State of health then.	State of health now.	Amount of relief rendered friends in the old country.	Amount of money furnished to U. S.
									From sickness.—(Days.)	Inability to obtain work.—(Days.)	Causes not stated.—(Days.)									Daily.	Weekly.	Monthly.				
Laborer.....	79	10	.....	.....	no	.....	.....	yes	.....	.....	\$1 25	\$3 00	.....	.....	no	.....	no	no	no	no	no	14	good	.....	.....
".....	80	10	.....	.....	"	.....	.....	"	.....	.....	.....	3 00	.....	.....	no	.....	"	"	"	"	"	14	"	.....	.....
".....	81	10	.....	.....	"	.....	.....	"	.....	.....	6 00	3 00	.....	.....	"	.....	"	"	"	"	"	14	"	.....	.....
".....	82	10	.....	.....	"	.....	.....	"	.....	.....	.....	.....	.....	.....	"	.....	yes	"	"	"	yes	18	"	.....	.....
".....	83	10	.....	.....	"	.....	.....	"	.....	.....	.....	3 00	.....	.....	"	.....	"	"	"	"	"	15	"	.....	.....
".....	84	10	.....	.....	"	.....	.....	"	.....	.....	free	3 00	.....	.....	"	.....	"	"	"	"	no	14	"	.....	.....
".....	85	.....	.....	.....	"	.....	.....	yes	.....	.....	4 00	3 00	.....	.....	"	.....	yes	"	"	"	yes	15	"	.....	.....
".....	86	.....	.....	.....	"	.....	.....	"	.....	.....	.....	3 00	.....	.....	"	.....	no	"	"	"	"	14	"	.....	.....
".....	87	10	.....	.....	600	.....	.....	b't'r	.....	.....	.....	.....	.....	.....	"	.....	yes	"	"	"	"	15	"	.....	\$40 00
".....	88	10	.....	.....	no	.....	.....	yes	.....	.....	.....	3 00	.....	.....	"	.....	no	"	"	"	no	14	"	.....	.....
".....	89	10	.....	.....	"	.....	.....	"	.....	.....	.....	.....	.....	.....	"	.....	yes	"	"	"	yes	12	"	.....	.....
".....	90	10	.....	.....	400	.....	.....	"	.....	.....	.....	.....	.....	.....	"	.....	"	"	"	"	"	14	"	.....	.....
".....	91	10	.....	.....	600	.....	.....	b't'r	.....	.....	.....	.....	.....	.....	"	.....	"	"	"	"	"	14	"	.....	.....
".....	92	10	.....	.....	400	.....	.....	"	.....	.....	.....	.....	.....	.....	"	.....	"	"	"	"	"	14	"	.....	.....
".....	93	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	"	.....	"	"	"	"	yes	14	"	.....	.....
".....	94	10	.....	\$8	1,000	600	.....	yes	.....	.....	.....	3 00	.....	.....	"	.....	"	"	"	"	no	15	"	.....	.....
".....	95	.....	.....	.....	no	.....	.....	"	.....	.....	.....	.....	.....	.....	"	.....	no	"	"	"	no	15	"	.....	.....
".....	96	.....	.....	.....	400	.....	.....	yes	.....	.....	.....	.....	.....	.....	"	.....	"	"	"	"	yes	14	"	.....	.....
Mill hand.....	97	.....	.....	.....	no	.....	.....	yes	.....	.....	4 00	.....	.....	.....	"	.....	yes	"	"	"	"	15	fair	.....	.....
Dock agent.....	98	12	.....	.....	farm	.....	.....	b't'r	.....	.....	3 00	.....	.....	.....	"	.....	"	"	"	"	no	15	good	.....	.....
Cooper.....	99	12	.....	.....	no	.....	.....	"	.....	.....	3 00	.....	.....	.....	"	.....	no	"	"	"	yes	20	poor	.....	.....
".....	100	11½	.....	80	"	.....	.....	yes	.....	.....	4 00	.....	.....	.....	"	.....	yes	"	"	"	no	10	fair	.....	.....
Miller.....	101	.....	.....	.....	"	.....	.....	"	.....	.....	4 00	.....	.....	.....	"	.....	"	"	"	"	yes	15	"	.....	.....
Laborer.....	102	.....	.....	90	"	.....	.....	yes	.....	.....	.....	.....	.....	.....	"	.....	no	"	"	"	no	15	good	60 00	.....
".....	103	.....	.....	35	"	.....	.....	b't'r	.....	.....	8 00	.....	.....	.....	"	.....	yes	"	"	"	yes	18	"	.....	.....
Mill hand.....	104	.....	.....	.....	"	.....	.....	yes	.....	.....	8 00	.....	.....	.....	"	.....	"	"	"	"	no	14	fair	.....	.....
Carpenter.....	105	.....	.....	.....	"	.....	.....	yes	.....	.....	4 00	.....	.....	.....	"	.....	"	"	"	"	yes	14	fair	.....	.....
".....	106	.....	.....	.....	"	.....	.....	"	.....	.....	.....	8 50	.....	.....	"	.....	no	"	"	"	no	10	good	.....	.....
Mill hand.....	107	.....	.....	.....	"	.....	.....	"	.....	.....	.....	8 50	.....	.....	"	.....	"	"	"	"	"	10	poor	.....	.....
".....	108	.....	.....	.....	"	.....	.....	"	.....	.....	.....	.....	.....	.....	"	.....	"	"	"	"	"	10	good	.....	.....
Foreman.....	109	.....	.....	.....	"	.....	.....	yes	.....	.....	4 00	.....	.....	.....	"	.....	yes	"	"	"	yes	12	good	.....	.....
Teaming.....	110	.....	.....	.....	"	.....	.....	"	.....	.....	.....	8 50	.....	.....	"	.....	no	"	"	"	no	12	"	.....	.....
Laborer.....	111	12	.....	25	"	.....	.....	yes	.....	.....	.....	3 50	.....	.....	"	.....	no	"	"	"	yes	15	"	.....	.....

LABOR AND INDUSTRIAL STATISTICS.

TABLE No. 5.—Continued,

[illegible]

TABLE NO. 5.—Continued.

Occupation.	Line number.	How many hours for a day's work in the old country.	Amount of money at in- terest or in the bank.	If foreign born, how much money did you have on arrival in U. S.	Do you own your home. If so, its value.	If mortgaged, amount of mortgage.	Rate of interest.	Are you as well off as five years ago.	Loss of time.			If renting home, monthly rental.	If boarding, cost per week, including room.	Life insurance, how much.	Do you belong to a bene- fit society.	Weekly benefits in case of sickness or accident.	Have you a sewing ma- chine.	Have you a piano.	Have you an organ.	Do you take a newspaper.			State of health then.	State of health now.	Amount of relief render- ed friends in the old country.	Amount of money fur- nished to friends for pas- sage to U. S.
									From sickness.— (Days.)	Inability to obtain work.—(Days.)	Causes not stated. (Days.)									Daily.	Weekly.	Monthly.				
Teamster	157	12	\$500		no			b't'r				* free			no		no	no	yes	no	no	14	good	good		
Laforer	158	11	200		"			yes	26	4 00		4 00			"		yes	no	no	no	no	12	"	"		
Kalsominer	159	11	150		"			yes				* free		2,000	"		yes	no	yes	no	no	15	"	"		
Miller	160	12			1,000			b't'r							yes	8 00	yes	no	no	no	no	12	"	"		
Blacksmith	161	12			1,000	700	7	"	6						"	8 00	no	no	no	no	no	10	"	"		
Foreman	162	12		15	1,000			"						8,000	"	10 00	yes	no	no	no	yes	12	"	"		
Teamster	163	12			no			yes	12						no		no	no	yes	no	no	12	"	"		
Cooper	164		150		"			b't'r	66						yes		yes	no	no	no	no	12	"	"		
"	165				"			yes	52						no		yes	no	no	no	yes	16	"	"		
"	166				2,000			b't'r	78						no		no	no	no	no	yes	12	"	"		
Engineer	167		200		no			yes						2,000	yes	15 00	no	no	no	no	yes	12	"	"		
"	168		4,000		"			b't'r	26					6,500	"	15 00	yes	yes	no	no	no	14	"	"		
Laborer	169	11			"			b't'r						2,000	no		no	no	no	no	yes	10	"	"		
"	170				"			no	78						no		no	no	no	no	no	11	"	"		
"	171	12			"			yes							"		no	no	no	no	yes	10	"	"		
Miner	172	12			"			yes							"		no	no	no	no	yes	15	"	"		
"	173				"			yes							"		yes	no	no	no	yes	14	"	"		
"	174				"			yes					8 50		"		yes	no	no	no	no	10	"	"		
"	175	12			600	250	7	no	26					100	yes	5 00	no	no	no	no	yes	12	"	poor	\$300	
"	176	12	1,000	100	no			yes	13					500	"	5 00	no	no	no	no	no	7	"	good	40	
"	177	12			"			"							no	8 00	no	no	no	no	no	10	"	"		
"	178	12			"			"							no		no	no	no	no	no	12	"	"		
"	179	12			"			"							no		no	no	no	no	no	12	"	"		
"	180	12			"			"							no		no	no	no	no	no	10	"	"		
"	181	12			700	200	7	no							yes		no	no	no	no	no	10	"	"		
"	182	12			no			b't'r							yes	8 00	no	no	no	no	no	12	"	"		
"	183	12			"			yes						600	yes	8 00	no	no	no	no	no	12	"	"		
"	184	12			"			"							no		no	no	no	no	no	12	"	"		
"	185	12			"			"							yes	8 00	no	no	no	no	no	12	"	"		
"	186	11			530	800									no		no	no	no	no	no	12	"	"		
"	187	12			600	300	7	yes							yes	3 00	no	no	no	no	no	11	"	"		
"	188	12			no			b't'r							no		no	no	no	no	no	12	"	"		
"	189	12			"			"							yes	3 00	no	no	no	no	no	11	"	"		
"	190	12			600			b't'r							yes	3 00	no	no	no	no	no	11	"	"		
"	191	12			no			b't'r							no		no	no	no	no	no	12	"	"		
"	192	12			"			b't'r							yes	3 00	no	no	no	no	no	10	"	"		
"	193	12	800		no			b't'r							no		no	no	no	no	no	10	"	"		

* House furnished by company.

PART VI.

STATISTICS

OF THE

STONE INDUSTRY.

THE STONE INDUSTRY.

“Building stone is abundant in Michigan. Numerous quarries of sandstone are found in Jackson county, some of which have been extensively worked for many years and afford a fine quality of building stone. Outcrops of sandstone or of limestone suitable for building purposes occur in many other counties, notably Shiawassee, Iosco, Kent, Eaton, Hillsdale, Barry and Saginaw. The rocks of the lower peninsula are limestone, gypsum, sand-rock and slates, all of a sedimentary origin and horizontally bedded. The lower peninsula of Michigan is a drift covered region, and the underlying sedimentary rocks not unfrequently outcrop in the central and more elevated portions of the State; these outcrops furnish the quarries from which building stone, etc., are obtained. In the rocks of the lower peninsula are found all the elements requisite for building material—stone, lime and sand. When the rocks are too deeply buried beneath the underlying drift to be available, the drift itself furnishes fragments and boulders in sufficient abundance to afford all the necessary material for foundations of buildings.

“In the upper peninsula, building stone exists in endless quantities, varied and accessible and of surpassing excellence. The brownstone of Marquette and elsewhere in the peninsula, may challenge comparison with any in the world for beauty, durability and general excellence. The quarry at Marquette is continuously worked on a moderate scale, and the stone finds great favor with the architects of Chicago, Detroit and Cleveland.”—From Report of Commissioner of Mineral Statistics, 1885.

The best known and most successful quarries in Michigan are those at Marquette and at Portage Entry. The firm of Furst, Jacobs and Co., proprietors of the operating quarry at Marquette, which is within the city limits, employs 100 men. The Commissioner of Mineral says: “The stone has a rich, warm, brown color, and is of a medium grained, very uniform texture. Some portions of the bed are variegated. It weathers well, and when seasoned becomes hard and is not then affected by the frost.” Sixty-four workmen responded to our questions in this quarry.

In the red stone quarry at Portage Entry a large force of men are employed. Our enumerator made a canvass of 284 names, but the blanks were so imperfectly filled out that only 122 could be used. Furst, Jacobs and Co., proprietors of the Portage Entry red stone and Marquette brown stone quarries, would give this bureau no information regarding their business.

In Huron county, at Bay Port, in Winsor township, is the only quarry of limestone utilized for building purposes in the State. It is worked by the Saginaw, Tuscola & Huron Railway Company, who employ 45 men. The company own 320 acres, 100 of which is quarry land. The first strata of rock is used for lime and is four feet thick. The strata underneath is a dark blue limestone seven feet thick, and is cut into block building stone, which is sold principally in Bay City, Saginaw, Flint and Grand Rapids. The men are employed from seven to nine months in the year; are paid cash every month and trade where they please, as the company run no store. Our table shows a canvass of 26 men in this quarry.

The Waverly Stone Co., at Holland, was organized April 20, 1887, with a capital of \$10,000. The company own 20 acres of land one mile from the village. Good rock for foundation stone is found from seven to eight feet below the surface, and block stone at seventeen feet. It is a deep blue sandstone, durable and will stand any kind of weather. Of the 20 men employed in the quarry a canvass of 12 was secured.

Three and a half miles east of Ionia is located the Ionia Stone Quarry, employing 20 men. It has been in operation for 20 years. The capital invested is \$9,000. The stone is a mottled or variegated sand rock, easily worked, and has stood the test as a building stone. It extends over an area of 800 acres, and the strata is 60 feet thick. We failed to secure a canvass of this quarry.

A sandstone for building purposes was formerly obtained at Flushing, Genesee county, but the quarry is now idle. Sandstone quarries were formerly worked at Parma, Sandstone, Napoleon and Springport, in Jackson county, and a good quality of building stone produced. Work is now suspended in all of these quarries.

The Michigan Stone Company operate a quarry at Stony Point, Jackson county, and have 100 acres of leased land. The rock is a green and buff sandstone. The company own a boarding house but no dwellings, nor do they run a store. The men are paid cash every month. There is no company physician or relief club.

The canvass of the building stone industry includes a total of 259 names. The nationalities are: Six Englishmen, 31 Germans, 1 Swiss, 19 Canadians, 8 Norwegians, 32 Swedes, 50 Americans, 16 Irishmen, 71 Finlanders, 4 Belgians, 3 Scotchmen, 9 Hollanders, 1 Polander, 4 Italians and 4 Frenchmen. Of those born in the United States 25 were of American parentage, 3 Canadian, 7 Irish, 2 German, one Scotch, 1 English, 2 Spanish, 2 Holland and 1 French. The occupations are: Three carpenters, 14 engineers, 3 machinists, 88 laborers, 8 teamsters, 18 scabblers, 6 drill men, 1 errand boy, 9 blacksmiths,

73 quarrymen, 3 lime burners, 1 superintendent, 16 stone cutters, 3 stone sawyers, 2 steam drillers, 3 miners, 1 molder, 2 firemen, 2 foremen, 1 channeler and 1 derrick man. Wages paid per month: Ten at \$97.50, fifty-nine \$45.50, twenty-two \$32.50, three \$42.90, sixty-two \$39, forty-five \$52, six \$58.50, two \$41.60, three \$33.33, fourteen \$45.83, two \$37.50, and one each \$40, \$36.40, \$33.80, \$100, \$37, \$16, \$18, \$33, \$47.92, \$65.50, \$42.12, \$41.66, \$19.50, \$75, \$84, \$71.50, \$45, \$80, \$26, two at \$78, four \$104 and five \$65.

Occupation by nationalities: Blacksmiths, two Swedes and one each German, Scotch, Irish, Finn, Canadian and 2 Americans; laborers, 14 Germans, 4 Canadians, 1 Norwegian, 7 Swedes, 3 Americans, 4 Irishmen, 51 Finns and 4 Italians; quarrymen, 11 Germans, 6 Irishmen, 5 Finns, 15 Americans, 1 Englishman, 3 Norwegians, 2 Belgians, 11 Swedes, 1 Scotchman, 8 Canadians, 9 Hollanders and 1 Polander; derrick man, 1 Swede; machinists, 3 Americans; engineers, 1 German, 7 Americans, 1 Englishman, 3 Irishmen, 1 Swede and 1 Canadian; cooper, 1 American; carpenters, 2 Canadians and 1 American; drill men, 2 Finns and 1 each Belgian, Canadian, Norwegian, Irishman; errand boy, Finn; firemen, 1 Irishman and 1 Norwegian; Superintendent, American; miners, 2 Englishmen and 1 German; channeler, Canadian; lime burners, 1 Canadian and 2 Germans; teamsters, 4 Americans and one each Englishman, German, Scot and Frenchman; scabblers, 1 Belgian, 6 Swedes and 11 Finns; steam drillers, 1 Swede and 1 American; molder, Swede; foremen, 1 Norwegian and 1 Swede; stone cutters, 1 Irishman, 9 Americans, 1 German, 3 Frenchmen, 1 Scot and 1 Englishman; stone sawyers, 1 American, 1 Norwegian and 1 Swede. There are 121 married men and 138 single. Of the married men 100 have children and 21 have none. The 100 have a total of 307 children. Nationality of those having no children: One American, 2 Hollanders, 3 Swedes, 2 Italians, 1 German and 12 Finns. The foreigners have 260 children and the Americans 47. Of the 307 children 122 attend school and 256 depend upon their parents for support. Hours for a day's work: One man works eleven hours and 258 ten hours. Number of months employed during the year: One man 1 month, two 2, five 3, eight 4, three 4½, seven 6, thirty-two 7, one 7½, seventeen 8, two 8½, sixteen 9, four 9½, thirty-six 10, four 10½, sixteen 11, nine 11½ and ninety-six 12. Loss of time from sickness: One man lost 4 days, eleven 6, one 7, six 12, thirteen 13, two 19, four 24, six 26, one 30, two 36, four 39, one 48, four 52, one 65, one 208. Loss of time from inability to obtain work: four men 78 days each, one 66, two 30, twelve 52, three 104, thirteen 26, two 39, seven 72, six 13, five 24, two 36, three 48, and one each 19, 20, 12, 18, 60, 84 and 120. Loss of time from causes not stated: Four 12 days, two 13, three 18, six 24, six 26, two 36, four 39, five 52, two 130, two 156, one each, 6, 8, 10, 16, 48, 54, 71, 78, 91,

100, 104. Age began work; One at 7 years, five 8, ten 9, thirty-two 10, ten 11, thirty-five 12, thirty-seven 13, forty-eight 14, thirty 15, forty-five 16, eight 17, five 18, one 19, two 20, one 21, two not answered. Number of years in the United States of those foreign born: One 1 month, five 4 months, thirteen 6 months, one 7 months, three 8 months, forty 1 year, three $1\frac{1}{2}$ years, twenty-three 2 years, thirteen 3, eight 4, fourteen 5, fourteen 6, nine 7, eleven 8, two nine, four 10, six 12, three 13, one 14, six 15, two 16, two 17, one 18, six 20, six 22, two 23, two 26, two 27, one 31, one 35 and one 37. Occupation in the old country: One stone cutter, 7 miners, 89 farmers, 2 firemen, 2 mill hands, 2 teamsters, 3 railroaders, 1 butcher, 55 laborers, 2 carpenters, 7 blacksmiths, 2 engineers, 2 sailors, 1 sawyer, 1 quarryman, 1 watchmaker, 1 hack driver, 1 brick maker, 1 mason and 22 not answered. Wages received in the old country: Per week, one man \$2, one \$2.50; per day, twelve men 50 cts. each, four 45 cts., one 40 cts., seventeen 55 cts., two 75 cts., one \$1, one \$1.25, one \$1.50; per month, one \$40, one \$25, sixteen \$14.30, one \$9.10, one \$20, three \$11.70, two \$32.50, one \$7, seven \$26, nine \$13, six \$6.50, one \$23.40, two \$15.60, four \$19.50, four \$8, four 10 40, three \$8.80, two \$20.80, one \$16.66, one \$8.50, one \$2.09, one \$40, one \$25.20, eight \$5, four \$4, one \$2, three \$14, three \$15, one \$16, one \$17, one \$11, four \$10, one \$29.12, one \$52, one \$12, one \$9.88, one \$30 and 40 not answered. How many hours for a day's work in the old country: Four worked 8 hours, two 9, thirty ten, ten 11, ninety-five 12, nine 13, thirteen 14, two 15, four 16 and 9 not answered. Fifty-three own their own homes, valued at \$43,005, as follows: Five \$150 each, three \$500, five \$200, two \$800, six \$700, six \$1,400, four \$1,000, six \$600, two \$900, two \$2,000, and 1 each \$2,500, \$400, \$155, \$750, \$650, \$3,200, \$1,500, \$175, \$300, \$5,000 and \$125. Eighteen are mortgaged: Six for \$100 each, four \$200, two \$400, and one each for \$175, \$150, \$250, \$1,000, \$500 and \$140; total, \$4,415. One pays 6 per cent interest, two 7, nine 8 and three 10. Those renting pay per month: Three \$5, two \$4.50, two \$5.50, two \$7, four \$2, six \$3, three \$6, one \$1.50, two \$3.50, one \$2.50, one \$8, one \$10 and eleven free. Those who board pay as follows: Seven \$5 per week, two \$4.25, fifty-five \$4.50, one \$4.75, three \$4, two \$3.50, five \$3, two \$5.50, twenty \$3.15, seven \$3.45, one \$2.50, fifty-eight \$3.75; the balance not answered. The total annual earnings of the men are \$112,684.83, of the children \$285. Twenty-eight sent a total sum of \$1,742, to the old country to pay the passage of friends to this country. Eighty-two sent for the assistance of relatives in the old country the sum of \$8,275. Eighty-two saved during the year a total sum of \$13,279, as follows: Seven \$50, two \$65, four \$75, two \$88, twenty-two \$100, thirteen \$150, eight \$200, two \$225, five \$300, two \$375, two \$175, and one each \$25, \$70, \$125, \$460, \$14, \$700, \$400, \$320, \$350, \$220, \$275, \$120, \$60. Sixty-nine had a total

of \$2,687 on arrival in this country and 165 nothing. Of those who answered the question 230 said that they were as well off as five years ago, 7 said that they were not and 3 said that they were better off. Those who were not so well off gave as a reason: One less money, 1 out of work, 4 less wages and 1 every reason. In reply to the question 'as to how wages compared with previous years in this country 99 replied about the same, 31 better and 23 lower. In regard to the present state of health 255 replied good, 2 not good and 2 fair. Twenty-three men have a total life insurance of \$27,700, as follows: Three \$500, thirteen \$1,000, five \$2,000, one \$3,000 and one \$200. Twelve belong to a benefit society and receive the following sums per week when sick: Two \$3, three \$5, one \$6, three \$10, one \$15 and two not stated. Three own pianos, 24 organs and 46 sewing machines. Thirteen take a daily newspaper, 93 a weekly and 21 a monthly.

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LABOR AND INDUSTRIAL STATISTICS.

TABLE NO. 6.—Statistics of the Stone Industry.

Occupation.	Line number.	Age.	Native.	Nativity of parents.	How long in U. S., if foreign born.—(Years.)	Married or single.	How many children in family.	How many attend school.	How many depend on you for support.	How many years at present occupation.	How long with present employer.—(Years.)	Number of months employed during year.	How many hours for a day's work.	Wages paid.	Annual earnings.	Are you paid cash or trade.	How often are you paid.	Amount saved during the year.	How do wages compare with former years in this country.	What occupation did you follow in the old country.	Wages received in the old country.
Blacksmith.....	1 25		Germany.....	Germany.....	7	s	...	...	...	9	6 mo	10	10	\$53 00 pr m	\$320 00	c	m	...	better	blacksmith laborer	\$2 00 per wk
Laborer.....	2 25		"	"	1	s	...	...	...	1	1 yr	10	10	45 50 "	455 00	c	m	...	same	not answ'd	\$7 80 per mo
Quarryman.....	3 38		"	"	37	s	4	8	5	22	15	10	10	80 00 "	800 00	c	m	...	"	watchmak'r	not answered
Derrickman.....	4 35		Switzerl'd.	Switzerl'd.	20	s	...	...	...	1	4 mo	12	10	45 50 "	546 00	c	m	...	"	...	\$52 00 per mo
	5 28				18	s	...	...	...	...	...	12	10	65 00 "	780 00	c	m	...	"	hack driver	12 00 "
Laborer.....	6 33		Canada.....	Canada.....	18	s	...	...	...	...	1 yr	12	11	39 00 "	468 00	c	m	...	"	blacksmith laborer	52 00 "
Blacksmith.....	7 31		"	Scotland.....	2	m	1	1	2	18	3 mo	12	10	65 00 "	780 00	c	m	...	lower	...	not answered
Channeler.....	8 22		"	Ireland.....	8	s	...	...	...	2 m	2 "	12	10	52 00 "	624 00	c	m	...	not answ'd	sailor	\$32 50 per mo
Laborer.....	9 27		Norway.....	Norway.....	18	s	...	...	...	...	1 "	* 10	10	45 50 "	455 00	c	m	\$100	higher	laborer	26 00
Drillman.....	10 24		"	Sweden.....	8	s	...	...	...	2	1 yr	10 1/2	10	52 00 "	546 00	c	m	...	...	...	...
Laborer.....	11 19		Sweden.....	"	1 1/2	s	...	...	...	...	1 mo	12	10	39 00 "	468 00	c	m	120	same	brickmaker	9 88 "
Machinist.....	12 32		U. S.....	U. S.....	...	s	...	...	...	10	1 "	12	10	52 00 "	624 00	c	m	...	not answ'd	...	...
Engineer.....	13 37		"	"	...	m	1	...	2	8	3 "	11	10	58 50 "	648 50	c	m	...	same	...	...
	14 23		"	England.....	...	s	...	...	...	5	1 yr	* 9	10	52 00 "	468 00	c	m	...	"	...	...
Laborer.....	15 27		"	"	...	s	...	...	...	2 m	2 mo	* 10	10	52 00 "	520 00	c	m	...	...	...	...
Engineer.....	16 24		"	"	...	s	...	...	...	7	2 yrs	* 8	10	52 00 "	416 00	c	m	...	"	...	...
Cooper.....	17 25		"	"	...	s	...	...	...	3 m	3 mo	12	10	45 50 "	546 00	c	m	...	"	...	...
Machinist.....	18 22		"	Canada.....	...	m	1	...	2	2	8 "	12	10	52 00 "	624 00	c	m	...	"	...	...
Carpenter.....	19 22		"	"	...	s	...	...	...	5	5 "	12	10	65 00 "	740 00	c	m	...	"	...	...
Drillman.....	20 24		"	Ireland.....	...	s	...	...	...	1	3 "	10	10	52 00 "	520 00	c	m	...	not answ'd	farmer	not answered
Engineer.....	21 23		Ireland.....	"	8	s	...	...	...	1	4 "	* 8	10	58 50 "	468 00	c	m	...	higher	...	...
"	22 32		"	"	...	m	2	...	8	7	3 "	12	10	52 00 "	624 00	c	m	...	"	engineer	\$20 00 per mo
Laborer.....	23 47		"	"	1	s	...	...	...	...	4 "	8	10	39 00 "	312 00	c	m	...	lower	farmer	6 50 "
Blacksmith.....	24 52		"	"	31	m	7	1	3	30	2 "	6	10	52 00 "	312 00	c	m	100	"	blacksmith	45 00 "
Fireman.....	25 24		"	"	1	s	...	...	...	8 m	4 yrs	11 1/2	10	45 50 "	523 25	c	m	...	lower	farmer	not answered
Quarryman.....	26 48		"	"	23	s	...	...	...	13	4 yrs	* 8	10	68 50 "	468 00	c	m	...	...	"	\$6 50 per mo
Miner.....	27 36		England.....	England.....	22	m	2	...	8	1 m	1 mo	12	10	26 00 "	312 00	c	m	...	...	miner	25 00 "
Engineer.....	28 20		"	"	4	s	...	...	...	4	...	7	10	53 00 "	364 00	c	m	...	"	not answ'd	not answered
Laborer.....	29 45		Finland.....	Finland.....	1	m	3	1	6	...	2 mo	12	10	39 00 "	468 00	c	m	...	not answ'd	mason	\$10 40 per mo
"	30 33		"	"	2	m	2	2	8	...	2 "	12	10	32 50 "	390 00	c	m	...	not answ'd	farmer	14 30 "
"	31 35		"	"	1	m	6	1	6	...	8 "	10	10	45 50 "	456 00	c	m	...	...	railroader	10 40 "
"	32 30		"	"	8	m	1	...	2 "	10	10	39 00 "	340 00	c	m	farmer	14 80 "
Quarryman.....	33 30		"	"	6	m	1	...	2 "	10	10	45 50 "	455 00	c	m	...	same	fireman	20 80 "

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[illegible]

* What engaged at for balance of year not reported.

LABOR AND INDUSTRIAL STATISTICS.

TABLE NO. 6.—Continued.

Occupation.	Line number.	How many hours for a day's work in the old country.	Amount of money at interest or in the bank.	If foreign born, how much money did you have on arrival in U. S.	Do you own your home.	If mortgaged, amount of mortgage.	Rate of interest.	Are you as well off as five years ago.	Loss of time.			If renting home, monthly rental.	If boarding, cost per week, including room.	Life insurance, how much.	Do you belong to a benefit society.	Weekly benefit in case of sickness or accident.	Have you a sewing machine.	Have you a piano.	Have you an organ.	Do you take a newspaper.			Age began work.	State of health then.	State of health now.	Amount of relief rendered friends in the old country.	Amount of money furnished to friends for passage to U. S.
									From sickness.—	(Days.)	Inability to obtain work.—(Days.)	Causes not stated.—(Days.)								Daily.	Weekly.	Monthly.					
Blacksmith.....	1	12	.....	.....	no	.....	.....	yes	52	.....	.....	.....	\$4 25	.....	no	.....	no	no	no	yes	no	no	16	good	good	\$200	.....
Laborer.....	2	.....	.....	.....	\$2,000	.....	.....	.....	.....	.....	.....	52	4 50	.....	yes	\$3 00	yes	yes	no	no	no	no	13	.....	.....	.....	.....
Quarryman.....	3	.....	.....	.....	no	.....	.....	.....	.....	.....	.....	52	4 50	.....	no	.....	no	no	no	no	no	no	10	.....	.....	.....	.....
Derrickman.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4 50	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....	.....
.....	5	10	.....	\$350	.....	.....	.....	.....	.....	.....	.....	.....	4 50	.....	.....	.....	.....	.....	.....	.....	.....	.....	14	.....	.....	.....	.....
Laborer.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4 50	.....	.....	.....	.....	.....	.....	.....	.....	.....	13	.....	.....	.....	.....
Blacksmith.....	7	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4 50	.....	.....	.....	yes	.....	.....	.....	.....	.....	13	.....	.....	.....	.....
Channeller.....	8	.....	.....	100	.....	.....	.....	.....	.....	.....	.....	.....	4 50	.....	.....	.....	no	.....	.....	.....	.....	.....	14	.....	.....	.....	.....
Laborer.....	9	12	.....	5	.....	.....	.....	.....	30	.....	.....	.....	4 50	.....	.....	.....	.....	.....	.....	.....	.....	.....	14	.....	.....	.....	.....
Drillman.....	10	10	\$10	.....	.....	.....	.....	.....	.....	.....	.....	.....	4 50	.....	.....	.....	.....	.....	.....	.....	.....	.....	15	.....	.....	.....	95
Laborer.....	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	15	.....	.....	.....	.....
Machinist.....	12	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4 50	.....	.....	.....	.....	.....	.....	.....	.....	.....	18	.....	.....	.....	.....
Engineer.....	13	.....	.....	.....	.....	.....	.....	.....	26	.....	.....	.....	.....	1,000	yes	5 00	yes	.....	.....	.....	.....	.....	20	.....	.....	.....	.....
.....	14	.....	.....	.....	.....	.....	.....	.....	12	.....	.....	.....	4 50	.....	no	.....	no	.....	.....	.....	.....	.....	17	.....	.....	.....	.....
Laborer.....	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4 50	.....	.....	.....	.....	.....	.....	.....	.....	.....	15	.....	.....	.....	.....
Engineer.....	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4 50	.....	.....	.....	.....	.....	.....	.....	.....	.....	16	.....	.....	.....	.....
Cooper.....	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4 50	.....	yes	10 00	.....	.....	.....	yes	no	no	11	.....	.....	.....	.....
Machinist.....	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4 50	.....	no	.....	yes	.....	.....	.....	.....	.....	16	.....	.....	.....	.....
Carpenter.....	19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4 50	.....	.....	.....	no	.....	.....	yes	no	no	14	.....	.....	.....	.....
Drillman.....	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4 50	.....	.....	.....	.....	.....	.....	.....	.....	.....	12	.....	.....	.....	.....
Engineer.....	21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4 50	2,000	.....	.....	.....	.....	.....	.....	.....	.....	17	.....	.....	.....	.....
.....	22	9	.....	60	150	.....	.....	no	25	.....	78	.....	4 50	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	70	.....
Laborer.....	23	.....	.....	80	no	.....	.....	yes	90	.....	66	.....	4 50	.....	.....	.....	.....	.....	.....	.....	.....	.....	12	.....	.....	24	.....
Blacksmith.....	24	10	.....	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	yes	.....	.....	.....	.....	.....	15	.....	.....	.....	.....
Fireman.....	25	.....	.....	20	.....	.....	.....	.....	13	.....	.....	.....	4 50	.....	.....	.....	no	.....	.....	.....	.....	.....	10	.....	.....	.....	.....
Quarryman.....	26	.....	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	4 50	.....	.....	.....	.....	.....	.....	.....	.....	.....	8	.....	.....	.....	.....
Miner.....	27	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4 50	.....	yes	10 00	yes	.....	.....	yes	.....	.....	12	.....	.....	.....	.....
Engineer.....	28	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4 50	.....	no	.....	no	.....	.....	.....	.....	.....	7	.....	.....	.....	.....
Laborer.....	29	12	.....	.....	.....	.....	.....	.....	180	.....	.....	.....	8 75	.....	.....	.....	.....	.....	.....	no	.....	.....	14	.....	.....	170	.....
.....	30	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8 75	.....	.....	.....	.....	.....	.....	.....	.....	.....	15	.....	.....	200	.....
.....	31	12	.....	.....	.....	.....	.....	.....	52	.....	.....	.....	8 75	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	125	.....
.....	32	12	.....	.....	.....	.....	.....	.....	52	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	15	.....	.....	.....	.....
Quarryman.....	33	10	.....	.....	.....	.....	.....	.....	52	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	16	.....	.....	.....	150	.....

LABOR AND INDUSTRIAL STATISTICS.

TABLE No. 6.—Continued.

Occupation.	Line number.	Age.	Nativity.	Nativity of parents.	How long in U. S., if foreign born.—(Years.)	Married or single.	How many children in family.	How many attend school.	How many depend on you for support.	How many years at present occupation.	How long with present employer.—(Years.)	Number of months employed during year.	How many hours for a day's work.	Wages paid.	Annual earnings.	Are you paid cash or trade.	How often are you paid.	Amount saved during the year.	How do wages compare with former years in this country.	What occupation did you follow in the old country.	Wages received in the old country.
Laborer	79	42	U. S.	U. S.	2	s	3	1	5	2	2 yrs	11½	10	\$52 00	\$598 00	c	m	\$100	not answ'd	farmer	\$0 52 per day
"	80	45	"	"	1	m	6	3	6	4	4 mo	4	10	39 00	156 00	c	m	100	not answ'd	"	55
"	81	41	"	"	6	m	5	3	6	4	"	6	10	45 50	273 00	c	m		not answ'd	not answ'd	not answered
"	82	41	"	"	4	m	5	3	6	2	"	4	10	39 00	156 00	c	m		not answ'd	farmer	\$0 55 per day
"	83	50	"	"	4	m	5	3	6	2	"	8	10	39 00	117 00	c	m		not answ'd	laborer	not answered
"	84	35	"	"	1	m				4	"	* 10	10	39 00	230 00	c	m			farmer	\$0 55 per day
"	85	24	"	"	1	m				4	"	* 10	10	39 00	330 00	c	m			"	not answered
"	86	34	"	"	6	m	2		4	3	"	* 7½	10	39 00	117 00	c	m			laborer	\$0 55 per day
"	87	23	"	"	8	s	2		4	2	"	* 2	10	39 00	292 50	c	m			farmer	50
"	88	33	"	"	4	m	2		4	2	"	* 2	10	39 00	78 00	c	m			farmer	55
"	89	40	"	"	1	m	4	2	5	4	"	11½	10	39 00	458 25	c	m			laborer	50
"	90	44	"	"	4	m	5	2	6	2	"	* 2	10	45 50	91 40	c	m			"	50
"	91	56	"	"	6	m	6	4	7	4	"	* 4	10	39 00	156 00	c	m			"	50
"	92	21	"	"	1	s	6	4	1	3	"	11½	10	39 00	448 50	c	m			"	50
"	93	40	"	"	6	m	5	2	6	4	"	* 4	10	45 50	182 00	c	m			"	55
"	94	22	"	"	1	s			1	4	"	* 3½	10	45 50	184 81	c	m			"	55
"	95	24	"	"	1	s			1	4	"	12	10	39 00	468 00	c	m			farmer	not answered
"	96	23	"	"	6	s			1	4	"	* 4	10	45 50	182 00	c	m			teamster	\$0 55 per day
"	97	25	"	"	6	s			1	3	"	11	10	45 50	500 50	c	m	150	not answ'd	farmer	55
"	98	33	"	"	6	s	2		8	4	"	* 4	10	39 00	156 00	c	m			laborer	50
"	99	21	"	"	6	s			2	3	"	* 8	10	39 00	117 00	c	m			"	50
"	100	40	"	"	4	m	4	2	5	3	"	* 3	10	45 50	136 50	c	m			"	45
Quarryman	101	50	"	"		m	1	2	1	30	1 wk	8	10	45 50	284 00	c	m	150	same	miner	\$32 50 per mo
"	102	26	England	Ireland	4	s				2	8 yrs	12	10	45 50	546 00	c	m		good	farmer	not answered
"	103	29	Finland	Finland	6	m	1		2		2 mo	12	10	45 50	546 00	c	m	14		fireman	not answered
"	104	23	"	"	1	s			4		2 mo	12	10	45 50	546 00	c	m		good	farmer	\$7 00 per mo
"	105	54	Norway	Norway	6	m	6	1			5 yrs	12	10	45 50	546 00	c	m			"	not answered
"	106	21	"	"	3	s				2	"	12	10	45 50	546 00	c	m		"	sawmill	28 00
"	107	21	"	"	3	s				3	"	12	10	41 60	499 20	c	m	300	"	farmer	not answered
"	108	26	Germany	Germany	6	m	3	1	4	2	"	10½	10	45 50	477 75	c	m		"	miner	\$18 00 per mo
"	109	30	"	"	7	s				5	"	12	10	52 00	624 00	c	m		better	teaming	50 00 per year
"	110	50	"	"	16	m	4	8	4		15	12	10	52 00	624 00	c	m		same	farmer	6 50 per mo
"	111	49	"	"	16	m	1		3		13	12	10	45 50	546 00	c	m		not answ'd	"	not answered

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Country	Age	Sex	Marital Status	Children	Education	Religion	Occupation	Income	Assets	Liabilities	Notes
Belgium	112	31	m	2	2	2	Belgium	10	45	50	same better good
Sweden	113	44	m	2	2	2	Sweden	10	53	00	"
"	114	50	m	8	1	1	"	10	45	50	"
"	115	40	s	12	5	5	"	10	45	50	"
"	116	41	m	2	1	1	"	10	33	00	"
"	117	16	s	8	5	5	"	10	39	00	"
"	118	37	s	10	3	3	"	10	39	00	"
"	119	47	s	6	2	2	"	10	45	50	"
"	120	41	m	8	3	3	"	10	45	50	"
"	121	33	s	6	4	4	"	10	45	50	"
"	122	23	s	1	1	1	"	12	45	50	"
"	123	28	m	1	1	1	"	12	45	50	"
"	124	27	s	1	9	9	Italy	11	39	00	"
"	125	38	s	2	2	2	"	12	39	00	"
"	126	45	m	1 1/2	1/2	1/2	"	12	39	00	"
"	127	45	m	1	6	6	"	12	39	00	"
"	128	37	m	5	4	4	Germany	12	39	00	"
"	129	22	s	5	7	1	"	12	45	50	"
"	130	46	s	37	17	6	Ireland	12	39	00	"
"	131	32	m	---	16	6	U.S.	12	97	50	"
"	132	28	s	---	12	6	"	12	97	50	"
"	133	35	m	9	9	3	Sweden	12	58	50	"
"	134	58	m	7	5	7	"	12	45	50	"
"	135	51	m	---	2	2	U.S.	12	39	00	"
"	136	19	s	---	6	6	"	7	39	00	"
"	137	22	s	6	5	5	Norway	7	45	50	"
"	138	23	s	7	6	6	Sweden	10 1/2	45	50	"
"	139	31	m	8	5	5	"	12	52	00	"
"	140	24	s	---	4	4	U.S.	10	45	50	"
"	141	16	s	---	3	3	"	8	19	50	"
"	142	17	s	---	1	7	Canada	11	39	00	"
"	143	32	m	15	3	3	France	9	45	50	"
"	144	40	m	15	13	13	Norway	12	75	00	"
"	145	40	m	17	14	14	Sweden	12	52	00	"
"	146	22	s	11	7	2	England	10	45	50	"
"	147	21	s	2	2	2	Sweden	12	45	50	"
"	148	35	m	8	5	3	"	4	39	00	"
"	149	21	m	1 1/2	1 1/2	1 1/2	"	12	52	00	"
"	150	47	m	28	4	8	France	12	78	00	"
"	151	40	m	8	5	6	Germany	7	45	50	"
"	152	40	m	10	5	2	"	7	45	50	"
"	153	40	m	10	1	4	"	7	45	50	"
"	154	42	m	12	5	2	"	7	45	50	"
"	155	31	m	5	2	2	"	7	32	50	"
"	156	26	m	3	1	1	"	7	42	90	"

TABLE No. 6.—Continued.

Occupation.	Line number.	How many hours for a day's work in the old country.	Amount of money at interest or in the bank.	If foreign born, how much money did you have on arrival in U. S.	Do you own your home. If so, its value.	If mortgaged, amount of mortgage.	Rate of interest.	Are you as well off as five years ago.	Loss of time.			If renting home, monthly rental.	If boarding, cost per week, including room.	Life insurance, how much.	Do you belong to a benefit society.	Weekly benefit in case of sickness or accident.	Have you a sewing machine.	Have you a piano.	Have you an organ.	Do you take a newspaper.			Age began work.	State of health then.	State of health now.	Amount of relief rendered friends in the old country.	Amount of money furnished to friends for passage to U. S.
									From sickness—(Days)	Inability to obtain work—(Days.)	Causes not stated.—(Days.)									Daily.	Weekly.	Monthly.					
Laborer.	79	12	.....	.....	no	.....	.....	yes	18	.....	*free	\$3 75	.....	.....	no	.....	no	no	no	no	no	10	good	good	\$200	.....
	80	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	8 75	.....	.....	no	.....	no	no	no	no	no	12	.....	.....	50	.....
	81	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	no	.....	no	no	no	no	no	15	.....	.....	50	.....
	82	12	.....	.....	.....	.....	.....	.....	26	.....	.....	.....	.....	.....	no	.....	no	no	no	no	no	16	.....	.....	50	.....
	83	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	yes	.....	no	no	no	no	no	15	.....	.....	50	.....
	84	12	.....	.....	.....	.....	.....	.....	6	.....	.....	8 75	.....	.....	.....	.....	no	no	no	no	no	10	.....	.....	100	.....
	85	12	.....	.....	.....	.....	.....	yes	.....	20	.....	8 75	.....	.....	.....	.....	no	no	no	no	no	10	.....	.....	75	.....
	86	12	.....	.....	.....	.....	.....	.....	.....	18	.....	8 75	.....	.....	.....	no	no	no	no	no	no	14	.....	.....	50	.....
	87	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	8 75	.....	.....	.....	yes	no	no	no	no	no	14	.....	.....	40	.....
	88	12	.....	.....	.....	.....	.....	.....	.....	.....	*free	.....	.....	.....	.....	.....	no	no	no	no	no	10	.....	.....	50	.....
" "	89	12	.....	.....	.....	.....	.....	yes	6	.....	.....	3 75	.....	.....	.....	.....	no	no	no	no	no	16	.....	.....	40	.....
	90	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	3 75	.....	.....	.....	yes	no	no	no	no	no	15	.....	.....	25	.....
	91	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	3 75	.....	.....	.....	.....	no	no	no	no	no	16	.....	.....	40	.....
	92	12	.....	.....	.....	.....	.....	.....	18	.....	.....	3 75	.....	.....	.....	.....	no	no	no	no	no	14	.....	.....	20	.....
	93	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	3 75	.....	.....	.....	.....	no	no	no	no	no	18	.....	.....	50	.....
	94	12	.....	.....	.....	.....	.....	.....	6	.....	.....	3 75	.....	.....	.....	.....	no	no	no	no	no	12	.....	.....	50	.....
	95	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	3 75	.....	.....	.....	.....	no	no	no	no	no	14	.....	.....	50	.....
	96	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	3 75	.....	.....	.....	.....	no	no	no	no	no	13	.....	.....	50	.....
	97	12	.....	.....	.....	.....	.....	.....	.....	28	.....	3 75	.....	.....	.....	.....	no	no	no	no	no	18	.....	.....	50	.....
	98	12	.....	.....	.....	.....	.....	.....	.....	.....	*free	3 75	.....	.....	.....	.....	no	no	no	no	no	10	.....	.....	40	.....
" "	99	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	no	no	no	no	no	18	.....	.....	50	.....
	100	12	.....	.....	\$2,500	.....	.....	.....	4	.....	.....	3 75	.....	.....	.....	.....	no	no	no	no	no	16	.....	.....	.....	.....
	101	.....	.....	.....	150	.....	.....	.....	.....	100	.....	.....	.....	.....	.....	.....	no	no	no	no	no	20	.....	.....	.....	.....
	102	8	\$400	.....	no	.....	.....	.....	.....	.....	5 00	.....	.....	.....	.....	yes	no	no	no	no	no	11	.....	.....	.....	.....
	103	10	.....	.....	no	.....	.....	.....	.....	.....	.....	4 25	.....	.....	.....	.....	no	no	no	no	no	10	.....	.....	.....	.....
	104	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	no	no	no	no	no	15	.....	.....	.....	.....
	105	10	.....	.....	.....	.....	.....	.....	.....	.....	4 50	.....	.....	.....	.....	.....	no	no	no	no	no	14	.....	.....	.....	.....
	106	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	4 50	.....	.....	.....	.....	no	no	no	no	no	14	.....	.....	.....	.....
	107	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	4 50	.....	.....	.....	.....	yes	no	no	no	no	13	.....	.....	.....	.....
	108	10	.....	.....	150	.....	.....	.....	39	.....	.....	.....	.....	.....	.....	.....	no	no	no	no	no	10	.....	.....	.....	.....
" "	109	12	400	no	bt'r	4 50	1,000	yes	yes	no	no	no	14		
	110	10	500	yes	no	yes	no	no	no	8		
	111	12	400	no	yes	no	no	no	13		

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[illegible]

*** House furnished by company.**

LABOR AND INDUSTRIAL STATISTICS.

TABLE No. 6.—Continued.

Occupation.	Line number.	Age.	Nativity.	Nativity of parents.	How long in U. S., if foreign born.—(Years.)	Married or single.	How many children in family.	How many attend school.	How many depend on you for support.	How many years at present occupation.	How long with present employer.—(Years.)	Number of months employed during year.	How many hours for a day's work.	Wages paid.	Annual earnings.	Are you paid cash or trade.	How often are you paid.	Amount saved during the year.	How do wages compare with former years in this country.	What occupation did you follow in the old country.	Wages received in the old country.
Quarryman	157 20		Germany	Germany	5	s	1	1	4	2	2 yrs	* 7	10	\$39 00	\$300 00	c	m	\$80	better	farmer	\$2 00 per mo
Laborer	158 39		"	"	5	m	1	1	2	1	1 1	* 7	10	26 40	300 00	c	m	100	same	"	5 00 "
Lime burner	159 20		"	"	1	s	2	1	8	6	6 mo	* 7	10	33 80	300 00	c	m	100	better	laborer	50 per day
Laborer	160 31		"	"	6	s	1	1	8	6	4 1/2 yrs	* 7	10	42 90	300 00	c	m	50	not ans'wd	farmer	4 00 per mo
"	161 27		"	"	1	s	1	1	1	1	6 mo	* 7	10	32 50	275 50	c	m	70	not ans'wd	"	2 50 per wk
"	162 25		"	"	2	s	1	1	1	1	6	* 9	10	23 50	292 50	c	m	50	lower	"	4 00 per mo
Engineer	163 28		"	"	10	s	1	1	2	6	6	* 9	10	39 00	351 00	c	m	100	"	farmer	6 00 per mo
Laborer	164 21		"	"	8	s	1	1	1	1	1	* 9	10	32 50	292 50	c	m	225	same	"	6 00 per mo
"	165 24		"	"	8	s	1	1	1	1	1	* 9	10	32 50	312 50	c	m	75	same	"	6 00 "
Quarryman	166 41		U. S.	"	12	m	5	4	6	6	6	* 7	10	53 00	364 00	c	m	460	better	"	"
Superintendent	167 28		"	Scotland	22	m	3	3	4	3	8 yrs	* 12	10	100 00	1 200 00	c	m	75	same	"	"
Quarryman	168 21		"	England	22	s	1	1	3	3	2	* 7	10	39 00	300 00	c	m	100	better	"	"
Engineer	169 42		"	Spain	22	m	2	2	3	6	2	* 7	10	39 00	300 00	c	m	75	same	"	"
Quarryman	170 24		"	Ireland	1	s	1	1	1	1	1 yr	* 7	10	45 50	425 00	c	m	200	lower	"	"
"	171 24		"	"	12	s	1	1	1	1	1	* 9	10	39 00	297 00	c	m	300	better	farmer	8 00 per mo
"	172 22		Ireland	"	22	s	1	1	1	1	1	* 9	10	45 50	409 50	c	m	150	same	farmer	6 00 per mo
Teamster	173 31		Scotland	"	20	m	1	1	1	1	1	* 7	10	37 70	350 00	c	m	200	better	"	14 00 "
Lime burner	174 23		Canada	Scotland	5	s	1	1	1	1	2	* 7	10	42 90	300 00	c	m	25	not ans'wd	"	14 00 "
Laborer	175 50		"	Germany	1	s	1	1	1	6	6 mo	* 6	10	32 50	227 50	c	m	50	lower	blacksmith	14 00 "
Quarryman	176 24		"	Ireland	6	m	5	2	6	6	6	* 7	10	39 00	275 00	c	m	200	lower	farmer	1 50 per day
Blacksmith	177 18		"	"	20	m	1	1	2	2	2 yrs	* 9	10	45 50	500 00	c	m	200	lower	farmer	15 00 per mo
Quarryman	178 23		"	"	1	s	1	1	2	1	1	* 7	10	37 00	318 50	c	m	100	lower	mill hand	1 25 per day
"	179 33		"	"	6	m	1	1	2	6	6 mo	* 7	10	32 50	250 00	c	m	65	lower	farmer	16 00 per mo
"	180 26		"	"	6	m	1	1	4	6	6	* 7	10	41 60	300 00	c	m	80	same	"	17 00 per mo
Laborer	181 23		"	"	9	s	1	1	1	6	6	* 7	10	32 50	300 00	c	m	75	lower	farmer	8 00 per mo
"	182 18		"	"	6	m	1	1	1	6	6	* 9	10	32 50	292 50	c	m	75	same	"	"
"	183 24		"	"	7	m	1	1	1	1	1 yr	* 12	10	16 00	192 00	c	m	75	not so good	"	"
Laborer	184 23		U. S.	U. S.	1	s	1	1	1	1	1	* 8	10	45 50	264 00	c	m	100	not ans'wd	"	"
Teamster	185 22		"	Holland	2	s	1	1	2	1	1	* 7	10	32 50	227 50	c	m	100	not ans'wd	farmer	8 00 per mo
Engineer	186 17		"	"	7	s	1	1	1	1	1	* 7	10	32 50	227 50	c	m	100	not ans'wd	"	"
Quarryman	187 22		"	"	7	s	1	1	1	1	1	* 7	10	32 50	227 50	c	m	100	not ans'wd	farmer	8 00 per mo
"	188 19		"	"	7	s	1	1	1	1	1	* 7	10	32 50	227 50	c	m	100	not ans'wd	"	"
"	189 27		Holland	"	7	m	1	1	1	1	1	* 7	10	32 50	227 50	c	m	100	not ans'wd	farmer	8 00 per mo

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"	190 28	"	"	"	6	m	2	4	5	3	10	33 50	"	260 00	c	s m	---	same	"	11 00	"
"	191 40	"	"	"	7	m	5	6	2	3	10	33 50	"	260 00	c	s m	---	not so good	"	10 00	"
"	192 28	"	"	"	6	s	---	8	6	3	10	32 50	"	260 00	c	s m	---	same	"	10 00	"
"	193 34	"	"	"	6	s	---	2	2	3	10	33 50	"	260 00	c	s m	---	not ans'w'd	"	5 00	"
"	194 31	"	"	"	20	s	---	3	8	2	10	39 00	"	312 00	c	s m	---	not so good	---	---	---
"	195 22	"	"	"	23	m	---	1	2	3	10	33 50	"	260 00	c	s m	---	lower	laborer	10 00 per mo	---
"	196 30	"	"	"	7	m	---	1	1	1	10	33 50	"	237 50	c	s m	---	same	"	10 00	---
"	197 19	"	"	"	15	m	---	6	1	1	10	32 50	"	227 50	c	s m	---	not so good	---	---	---
Teamster	198 32	U. S.	U. S.	U. S.	---	s	---	---	1 1/2	1 1/2	12	18 00	"	216 00	c	m	123	same	---	---	---
Blacksmith	199 30	---	---	---	---	m	4	5	6	1	12	47 92	"	575 00	c	m	---	"	---	---	---
Laborer	200 28	---	---	---	---	m	8	4	3	3	10	33 33	"	400 00	c	m	---	not so good	---	---	---
"	201 19	---	---	---	---	m	1	2	3	8 mo	12	32 50	"	390 00	c	m	---	same	---	---	---
Quarryman	202 33	---	---	---	---	m	1	1	---	6 yrs	12	45 83	"	540 00	c	m	---	"	---	---	---
"	203 25	---	---	---	---	s	---	---	18	4	12	45 83	"	550 00	c	m	---	"	---	---	---
"	204 21	---	---	---	---	s	---	---	8	3	12	45 83	"	550 00	c	m	---	not ans'w'd	---	---	---
"	205 34	---	---	---	---	m	3	5	1 1/2	1 1/2	12	33 33	"	400 09	c	m	100	same	---	---	---
"	206 33	---	---	---	---	m	2	3	3	3	12	45 83	"	550 00	c	m	100	"	---	---	---
"	207 35	---	---	---	---	m	---	1	8	4	12	45 83	"	550 00	c	m	---	"	---	---	---
"	208 32	---	---	---	---	m	8	4	4	4	12	37 50	"	450 00	c	m	---	"	---	---	---
"	209 29	---	---	---	---	s	---	---	1	13	12	45 83	"	550 00	c	m	150	"	---	---	---
"	210 25	---	---	---	---	m	2	3	8	8	12	45 83	"	550 00	c	m	---	"	---	---	---
"	211 30	Ireland	Ireland	Ireland	---	s	---	---	7	5	12	45 83	"	550 00	c	m	---	"	---	---	---
"	212 39	---	---	---	---	s	---	---	---	3	12	45 83	"	550 00	c	m	---	better	laborer	13 00 per mo	---
"	213 51	---	---	---	---	s	---	---	20	4	12	45 83	"	550 00	c	m	---	"	farmer	15 00	---
"	214 38	---	---	---	---	m	7	7	12	4	12	37 50	"	450 00	c	m	---	same	quarryman	29 12	---
"	215 32	---	---	---	---	s	---	---	17	4	12	33 33	"	400 00	c	m	65	"	farmer	5 00	---
Laborer	216 59	---	---	---	---	s	---	---	---	1 1/2	11 1/2	33 50	"	372 75	c	m	---	"	laborer	18 00	---
"	217 21	Canada	Canada	Canada	---	m	1	2	10	5	12	65 00	"	780 00	c	m	200	not ans'w'd	miner	26 00	---
Quarryman	218 23	---	---	---	---	s	---	---	7	4	12	45 83	"	550 00	c	m	---	same	---	---	---
"	219 42	---	---	---	---	s	---	---	23	4	12	45 83	"	550 00	c	m	---	better	farmer	13 00	---
"	220 29	---	---	---	---	m	2	3	8	8	12	42 12	"	505 44	c	m	---	same	---	---	---
Engineer	221 30	Canada	Canada	Canada	---	m	---	---	1 1/2	1 1/2	12	45 83	"	550 00	c	m	---	"	laborer	6 50	---
Quarryman	222 27	Poland	Poland	Poland	---	s	---	---	14	4	12	41 66	"	500 00	c	m	---	"	---	---	---
"	223 41	Germany	Germany	Germany	---	m	1	2	6	6	12	45 83	"	550 00	c	m	---	"	farmer	at home	---
Laborer	224 30	Sweden	Sweden	Sweden	---	s	---	---	---	2	10	52 00	"	520 00	c	m	---	"	laborer	19 50 per mo	---
"	225 20	---	---	---	---	s	---	---	---	1	10	39 00	"	390 00	c	m	---	not ans'w'd	"	9 10	"
"	226 30	---	---	---	---	s	---	---	---	1	10	39 00	"	390 00	c	m	---	"	"	not ans'd	---
Scabblr	227 22	---	---	---	---	s	---	---	3	3	11	52 00	"	572 00	c	m	---	same	sailor	20 00 per mo	---
"	228 28	---	---	---	---	s	---	---	1	1	11	52 00	"	572 00	c	m	150	not ans'w'd	laborer	19 50	---
"	229 30	---	---	---	---	s	---	---	---	1	12	52 00	"	624 00	c	m	150	same	"	19 50	---
"	230 22	---	---	---	---	s	---	---	1	1	19	52 00	"	624 00	c	m	100	not ans'w'd	"	28 00	"
"	231 24	---	---	---	---	s	---	---	---	1	12	52 00	"	624 00	c	m	---	not ans'w'd	"	15 60	"
"	232 23	Finland	Finland	Finland	---	s	---	---	1 m	1 mo	1	52 00	"	52 00	c	m	---	same	"	13 00	"
"	233 23	---	---	---	---	s	---	---	6	1 yr	9	52 00	"	468 00	c	m	---	not ans'w'd	"	18 00	"
Drillman	234 31	---	---	---	---	s	---	1 1/2	1 1/2	2	10	52 00	"	520 00	c	m	200	same	"	11 70	---

LABOR AND INDUSTRIAL STATISTICS.

TABLE No. 6.—Continued.

Occupation.	Line number.	How many hours for a day's work in the old country.	Amount of money at interest or in the bank.	If foreign born, how much money did you have on arrival in U. S.	Do you own your home. If so, its value.	If mortgaged, amount of mortgage.	Rate of interest.	Are you as well off as five years ago.	Loss of time.			If renting home, monthly rental.	If boarding, cost per week, including room.	Life insurance, how much.	Do you belong to a benefit society.	Weekly benefit in case of sickness or accident.	Have you a sewing machine.	Have you a piano.	Have you an organ.	Do you take a newspaper.			Age began work.	State of health then.	State of health now.	Amount of relief rendered friends in the old country.	Amount of money furnished to friends for passage to U. S.		
									From sickness—(Days.)	Inability to obtain work.—(Days.)	Causes not stated.—(Days.)									Daily.	Weekly.	Monthly.							
Quarryman	157	14	---	---	no	---	---	b't'r	2	48	---	---	\$3 15	---	---	---	---	no	no	no	no	yes	no	13	good	good	---	---	
Laborer	158	14	---	---	\$200	---	---	---	---	48	---	---	8 15	---	---	---	---	---	---	---	---	no	---	14	---	---	---	---	---
Lime burner	159	12	---	---	900	\$400	7	yes	48	---	---	---	8 15	---	---	---	---	---	---	---	---	no	---	10	---	---	---	---	---
Laborer	160	14	\$140	---	no	---	---	b't'r	---	120	---	---	8 15	---	---	---	---	---	---	---	---	---	14	---	---	---	---	---	
"	161	12	50	---	---	---	---	yes	---	---	---	---	8 15	---	---	---	---	---	---	---	---	---	10	---	---	---	---	---	
"	162	12	---	---	---	---	---	---	36	---	---	---	8 15	---	---	---	---	---	---	---	---	---	13	---	---	---	---	---	
"	163	12	---	---	---	---	---	---	---	48	24	---	8 15	---	---	---	---	---	---	---	---	---	14	---	---	---	---	---	
Engineer	164	---	---	---	---	---	---	---	12	24	---	---	8 45	---	---	---	---	---	---	---	---	---	12	---	---	---	---	---	
Laborer	165	16	---	10	600	200	8	---	24	36	12	---	8 45	---	---	---	---	---	---	---	---	---	10	---	---	---	---	---	
"	166	16	---	5	no	---	---	---	6	24	---	---	8 45	---	---	---	---	---	---	---	---	---	12	---	---	---	---	\$50	
Quarryman	167	---	---	---	1,000	100	10	---	6	24	---	---	8 15	---	---	---	---	yes	---	---	yes	yes	13	---	---	---	---	---	
Superintendent	168	---	1,000	---	no	---	---	b't'r	---	---	---	---	---	\$1,000	---	---	yes	yes	---	---	---	yes	14	---	---	---	---	---	
Quarryman	169	---	---	---	---	---	---	yes	12	---	24	---	8 15	---	---	---	no	no	---	---	---	no	14	---	---	---	---	---	
Engineer	170	---	---	---	700	175	10	b't'r	12	---	---	---	8 15	1,000	yes	\$5 00	---	---	---	---	---	---	11	---	---	---	---	---	
Quarryman	171	---	---	---	no	---	---	yes	12	24	---	---	8 15	---	---	---	---	---	---	---	no	---	15	---	---	---	---	---	
"	172	---	---	---	---	---	---	---	24	12	24	---	8 45	---	---	---	---	---	---	---	---	---	14	fair	fair	200	50		
"	173	14	---	15	---	---	---	---	---	---	16	---	8 45	---	---	---	---	---	---	---	---	---	12	---	---	---	---	---	
"	174	---	400	---	800	150	8	---	---	---	---	---	8 45	---	---	---	---	---	---	---	---	---	12	---	---	---	---	---	
Teamster	175	8	200	---	8,200	---	---	---	---	---	18	---	8 15	---	---	---	---	---	---	---	yes	no	9	---	---	---	---	---	
Lime burner	176	12	---	5	400	100	8	b't'r	12	---	24	---	8 15	---	---	---	---	---	---	---	---	---	12	---	---	---	---	---	
Laborer	177	14	---	2	no	---	---	---	---	2	---	---	8 15	---	---	---	---	---	---	---	---	---	13	---	---	---	---	---	
Quarryman	178	14	---	5	---	---	---	yes	---	---	36	---	8 15	---	---	---	---	---	---	---	---	---	14	---	---	---	---	---	
Blacksmith	179	12	---	1,000	1,500	250	8	---	---	---	---	---	---	1,000	yes	\$6 00	---	---	---	---	yes	yes	10	---	---	---	---	---	
Quarryman	180	14	---	15	no	---	---	b't'r	---	---	24	---	3 15	---	no	---	---	---	---	---	no	no	12	---	---	---	---	---	
"	181	10	---	15	---	---	---	yes	---	---	18	---	8 15	---	yes	6 00	---	---	---	---	---	---	10	---	---	---	---	---	
"	182	14	---	5	---	---	---	---	---	---	24	---	8 15	---	no	---	---	---	---	---	---	---	14	---	---	---	---	---	
"	183	14	---	25	---	---	---	---	---	18	---	---	8 15	---	---	---	---	---	---	---	---	---	14	---	---	---	---	---	
Laborer	184	---	---	6	---	---	---	---	12	24	12	---	8 15	---	---	---	---	---	---	---	---	---	14	---	---	---	---	---	
"	185	12	---	---	---	---	---	---	---	36	6	---	8 45	---	---	---	---	---	---	---	---	---	10	---	---	---	---	---	
Teamster	186	---	100	---	2,400	1,000	8	b't'r	12	---	---	---	---	---	---	---	---	---	---	---	---	---	14	---	---	---	---	---	
Engineer	187	---	---	---	no	---	---	no	---	72	---	---	---	---	---	---	yes	---	---	yes	yes	yes	13	---	---	---	---	---	
Quarryman	188	---	---	---	---	---	---	yes	30	---	---	---	---	---	---	---	no	---	no	---	---	---	11	---	---	---	---	---	
"	189	11	---	---	---	---	---	---	60	---	---	---	---	---	---	---	yes	---	---	---	---	---	10	---	---	---	---	---	

LABOR AND INDUSTRIAL STATISTICS.

TABLE No. 6.—Continued.

Occupation.	Line number.	Age.	Nativity.	Nativity of parents.	How long in U. S., if foreign born.—(Years.)	Married or single.	How many children in family.	How many attend school.	How many depend on you for support.	How many years at present occupation.	How long with present employer.—(Years.)	Number of months employed during year.	How many hours for a day's work.	Wages paid.	Annual earnings.	Are you paid cash or trade.	How often are you paid.	Amount saved during the year.	How do wages compare with former years in this country.	What occupation did you follow in the old country.	Wages received in the old country.
Drillman	235	22	Finland	Finland	2	s	...	...	...	1	6 mo	12	10	\$45 00	\$540 00	c	m	\$100	same	laborer	\$18 00 per mo
Laborer	236	12	"	"	2	s	...	...	...	...	1 yr	10	10	39 00	340 00	c	m	...	not answ'd	"	14 30
"	237	26	"	"	2	s	...	...	...	...	1	10	10	45 50	455 00	c	m	...	"	"	not answered
"	238	30	"	"	1	s	3	...	4	...	1	12	10	39 00	468 00	c	m	150	"	"	11 70 per mo
"	239	24	"	"	1	s	...	...	...	...	1	12	10	39 00	468 00	c	m	...	not answ'd	"	11 70
"	240	24	"	"	2	m	1	...	2	...	4 mo	10	10	39 00	390 00	c	m	...	not answ'd	"	not answered
Drillman	241	32	Canada	Canada	5	m	2	...	3	...	6	12	10	58 50	702 00	c	m	...	same	"	26 00 per mo
Engineer	242	30	U. S.	"	...	m	2	...	...	...	1 yr	12	10	52 00	624 00	c	m	...	lower	farmer	8 00 per mo
Laborer	243	26	Germany	Germany	6	m	...	...	...	...	2	12	10	52 00	624 00	c	m	...	not answ'd	laborer	6 50
"	244	30	"	"	6	s	...	...	...	...	1	11	10	45 50	540 50	c	m	...	"	"	8 00 per mo
Teamster	245	23	"	"	3	s	...	...	...	...	1	12	10	45 50	546 00	c	m	...	"	farmer	6 50
Stone cutter	246	28	U. S.	U. S.	...	s	...	...	...	...	1	12	10	97 50	1,170 00	c	m	320	better	"	"
"	247	33	"	"	...	m	1	1	2	...	1	12	10	104 00	1,248 00	c	m	300	"	"	"
"	248	32	"	"	...	s	...	...	...	...	6	12	10	78 00	936 00	c	m	100	same	"	"
"	249	30	"	"	...	m	1	1	2	...	6 mo	10	10	97 50	975 00	c	m	375	"	"	"
"	250	27	"	Germany	...	s	...	...	...	...	4 yrs	12	10	97 50	1,170 00	c	m	350	better	"	"
"	251	28	"	"	...	s	...	...	...	...	1	12	10	97 50	1,170 00	c	m	175	"	"	"
"	252	40	Germany	"	37	s	...	...	2	...	6 mo	12	10	84 50	1,014 00	c	m	225	same	"	"
"	253	37	U. S.	Ireland	...	m	3	2	4	...	2 yrs	12	10	104 00	1,248 00	c	m	220	better	"	"
"	254	30	France	France	26	s	...	...	...	...	6 mo	11	10	97 50	1,072 50	c	m	275	same	"	"
"	255	27	"	"	23	s	...	...	...	...	2½ yrs	12	10	97 50	1,170 00	c	m	150	"	"	"
"	256	36	"	"	35	m	7	5	8	...	6 mo	12	10	104 00	1,248 00	c	m	175	"	"	"
"	257	30	Scotland	Scotland	27	s	...	...	...	...	2½ yrs	12	10	97 50	1,170 00	c	m	460	"	"	"
"	258	45	England	England	12	m	5	8	6	...	1	12	10	104 00	1,248 00	c	m	375	better	stone cutter	25 20 per mo
Fireman	259	17	Norway	Norway	15	s	...	...	...	...	4	6	10	39 00	234 00	c	m	...	"	"	"

TABLE NO. 6.—Continued.

Occupation.	Line number.	How many hours for a day's work in the old country.	Amount of money at in-terest or in the bank.	If foreign born, how much money did you have on arrival in U. S.	Do you own your home. If so, its value.	If mortgaged, amount of mortgage.	Rate of interest.	Are you as well off as five years ago.	Loss of time.			If renting home, month-ly rental.	If boarding, cost per week, including room.	Life insurance, how much.	Do you belong to a bene-volent society.	Weekly benefit in case of sickness or accident.	Have you a sewing ma-chine.	Have you a piano.	Have you an organ.	Do you take a newspaper.			Age began work.	State of health then.	State of health now.	Amount of relief render-ed friends in the old country.	Amount of money fur-nished to friends for passage to U. S.
									From sickness.—(Days.)	Inability to obtain work.—(Days.)	(Causes not stated.—(Days.)									Daily.	Weekly.	Monthly.					
Drillman	225	12	.....	.....	no	.....	.....	yes	.....	52	.....	.....	\$4 50	.....	.....	.....	no	no	no	no	no	18	good	good	\$50 00	.....
Laborer	226	12	.....	.....	no	.....	.....	yes	.....	13	.....	.....	4 50	.....	.....	.....	no	no	no	no	no	10	.....	.....	50 00	.....
"	227	12	.....	.....	no	.....	.....	yes	.....	.....	.....	.....	.....	.....	.....	.....	no	no	no	no	no	18	.....	.....	.....	.....
"	228	12	.....	.....	no	.....	.....	yes	.....	.....	.....	.....	8 75	.....	.....	.....	no	no	no	no	no	14	.....	.....	.....	.....
"	229	12	.....	.....	no	.....	.....	yes	.....	.....	.....	.....	.....	.....	.....	.....	no	no	no	no	no	18	.....	.....	.....	.....
"	240	12	.....	.....	no	.....	.....	yes	.....	52	.....	.....	.....	.....	.....	.....	no	no	no	no	no	16	.....	.....	.....	\$75 00
Drillman	241	.....	.....	.....	no	.....	.....	yes	.....	.....	.....	.....	.....	.....	.....	.....	no	no	no	no	no	16	.....	.....	.....	.....
Engineer	242	.....	.....	.....	no	.....	.....	yes	.....	.....	.....	.....	.....	.....	.....	.....	no	no	no	no	no	14	.....	.....	.....	.....
Laborer	243	12	.....	.....	no	.....	.....	yes	.....	.....	.....	.....	4 50	.....	.....	.....	no	no	no	no	no	10	.....	.....	.....	.....
"	244	12	.....	.....	no	.....	.....	yes	.....	26	.....	.....	.....	.....	.....	.....	no	no	no	no	no	18	.....	.....	.....	.....
Teamster	245	.....	.....	.....	no	.....	.....	yes	.....	.....	.....	.....	4 50	.....	.....	.....	no	no	no	no	no	15	.....	.....	.....	.....
Stone cutter	246	.....	.....	.....	no	.....	.....	yes	.....	.....	.....	.....	5 00	.....	.....	.....	no	no	no	no	no	15	.....	.....	.....	.....
"	247	.....	.....	.....	\$1,000	.....	7	yes	.....	.....	.....	.....	.....	\$2,000	yes	.....	yes	no	yes	yes	yes	16	.....	.....	.....	.....
"	248	.....	.....	.....	no	.....	.....	yes	.....	.....	.....	.....	5 00	.....	.....	.....	no	no	no	no	no	17	.....	.....	.....	.....
"	249	.....	.....	.....	700	.....	6	yes	.....	18	.....	.....	.....	1,000	no	.....	yes	no	yes	yes	yes	12	.....	.....	.....	.....
"	250	.....	.....	.....	no	.....	.....	b't'r	.....	.....	.....	.....	5 00	1,000	no	.....	no	no	no	no	no	17	.....	.....	.....	.....
"	251	.....	.....	.....	no	.....	.....	yes	.....	.....	.....	.....	5 50	1,000	no	.....	no	no	no	no	no	16	.....	.....	.....	.....
"	252	.....	.....	.....	750	.....	.....	yes	.....	.....	.....	.....	.....	1,000	no	.....	yes	no	yes	yes	yes	19	.....	.....	100 00	150 00
"	253	.....	.....	.....	no	.....	.....	yes	.....	.....	.....	.....	.....	1,000	no	.....	no	no	no	no	no	16	.....	.....	.....	.....
"	254	.....	.....	.....	no	.....	.....	yes	.....	26	.....	.....	5 00	.....	.....	.....	no	no	no	no	no	21	.....	.....	.....	.....
"	255	.....	.....	.....	no	.....	.....	yes	.....	.....	.....	.....	.....	.....	.....	.....	no	no	no	no	no	16	.....	.....	.....	.....
"	256	.....	.....	.....	650	.....	7	yes	.....	.....	.....	.....	5 50	.....	yes	.....	yes	yes	yes	yes	yes	18	.....	.....	.....	.....
"	257	.....	.....	.....	no	.....	.....	yes	.....	.....	.....	.....	5 00	.....	no	.....	no	no	no	no	no	19	.....	.....	.....	.....
"	258	10	.....	.....	900	.....	.....	yes	.....	.....	.....	.....	.....	2,000	no	.....	yes	no	yes	yes	yes	18	.....	.....	.....	.....
Fireman	259	.....	.....	.....	no	.....	.....	yes	.....	156	.....	.....	4 50	.....	.....	.....	no	no	yes	no	no	11	.....	.....	.....	.....

PART VII.

STATISTICS

OF THE

COPPER INDUSTRY.

THE COPPER INDUSTRY.

The inexhaustible copper deposits of the northern peninsula supply the larger share of the copper produced for manufacturing purposes in the world. Few people realize the extent of the copper wealth of Michigan or comprehend the magnitude of the copper industry—from the process of mining to the operation of the rock house and stamp mill and final purification and preparation for market in the smelting works.

“Copper mining in Michigan has become a very uniform industry: prices may vary but the work at the mines goes on steadily with little apparent change. There is all the while a gradual increase in the magnitude of the operations, resulting in an increased production and a corresponding lessening of cost. Copper mining requires a great preliminary outlay, the work cannot be successfully prosecuted otherwise. The rock, after it is mined, unless it is mass copper, must be crushed and stamped to great fineness and washed to separate the copper from the rock, and the copper finally smelted before it is sold. All these successive manipulations require the procurement of mechanical appliances that are very elaborate and costly. Great skill and experience are essential on the part of those who have the direction of such work. No copper mine in Michigan can be successfully operated otherwise than by all this necessary outlay. As soon as it has become established that the lode is sufficiently good to justify its permanent working then the rock house and stamp mill must be provided. Hundreds of thousands of dollars must be thus judiciously expended before the mine becomes established as a working, paying enterprise.”—From Report Commissioner of Mineral Statistics, 1886.

For the past few years copper mining has not been a paying investment to the stockholders, except with a few companies. Since December, 1887, however, the advance in price brought on a boom in copper mining, and 1888 will be remembered as a year of prosperity.

“The contrast between the prosperity of the business now and what it was a few months ago, and in fact what it has been for two years past, is indeed gratifying. During the years 1885, '86 and '87, the average price at which Lake Superior copper sold was within a fraction of 11 cents per pound; but suddenly, in December, 1887, the price advanced from 12 to 18 cents. More recent arrangements have been made by all the leading copper mining companies, with what is known as the French Copper Syndicate, for the sale of all the copper produced for several ensuing years at a minimum price of 13½ cents per pound, or at the fixed price of 18½ cents, with the agreement that if copper shall be worth more than this fixed amount, the excess shall be divided equally between

the syndicate and the producers. Much confidence is felt in the financial strength of the syndicate, and its ability to meet its agreement for the purchase of copper. Their experience for the past three years has demonstrated the fact that they can produce copper, nearly all of them, for 10 cents per pound. For three years the Atlantic, Franklin, Osceola, etc., have mined copper and sold it at an average of 11 cents per pound and have made a little money; but it has been too close a business; the margin is too small; they are exhausting the mines, using up machinery, in fact, borrowing of the future. Not that they have been running in debt, but in various ways there has been a degree of economy exercised that may, no doubt, be likened to borrowing of the future—changes and improvements that were desirable have been put off to the future. With copper selling permanently at 10 cents the large number of our copper mines could have little value. It would become with most of the companies a mere struggle for existence. Leaving out the Calumet and Hecla, Tamarack and the Quincy, the others must have more than 10 cents to be valuable mines. Naturally the rise in the price of copper has occasioned a considerable increase of activity in the working of the mines previously in operation, and has caused steps to be taken to put into operation some that were idle. With the rise in the price of copper, there was a corresponding rise in the stocks of the companies. Some of them have doubled in value in a few weeks' time, and the fortunate possessors have been enriched accordingly. Some of the stocks will still go higher. There is a pleasant prospect spread out for the copper mining industry."—From Report Commissioner Mineral Statistics, 1867.

The history and resources of the copper country; the discovery of the mineral in the Ontonagon river and the development of this important industry from that first find to the present time; the great improvement in mining machinery and the application of all the inventions and discoveries of science to the mining of copper, would fill a volume. That work, however, belongs to another State Commissioner; that of Mineral Statistics, Hon. C. D. Lawton, whose able and exhaustive reports are invaluable to those who are interested in mining, mineralogy and geology. The work of this bureau relates to the wages, surroundings and social condition of the miners and other laborers employed in the mines, surface work, stamp mills and smelting works. We give below, as a preface, a sketch of how copper is produced, from the mining to the stamp mill work, taken from the annual report of the Commissioner of Mineral Statistics for 1878:

"The lode having been satisfactorily tested by surface examination, shafts are started at convenient distances apart. The shafts vary in dimensions, but 10 by 14 feet is a good working shaft. In Lake Superior copper mines the shafts are sunk on the dip of the lode, whatever angle it may be. Thence these shafts are incline planes. They are sunk to a depth of 100 feet, at which point the first level is started and is run from shaft to shaft until the whole number of shafts are connected by a continuous gallery, or drift. The shafts, while the drifts are opening, are sunk away to the second level; the second level, in due time, is opened like the first, and so on down. Between the shafts, for the purpose of ventilation and convenience in stoping, minor shafts are sunk, called winzes. The mine thus opened is like the rectangular blocks on a city map tilted up; the shafts and drifts are main streets crossing each other, and the winzes are alleys. The solid blocks of veinstone bounded by the streets are, if the whole lode is

workable, taken out excepting pillars of rock left to support the hanging wall and keep the mine from coming together. This work is called stoping. The shafts are cribbed from the surface down to solid rock with square timber and plank. In large mines like the Calumet, one shaft is used as a hoisting shaft, in which is laid the rail track, one as a pump shaft, while another or intermediate opening, is fitted for the man engine, the use of which machine is to take the men in and out of the mine. In the mine we find a populous of busy workers; the atmosphere of the place is damp and murky. The only light is that from the lamp on the hats of the men, or head-lights on the rock cars. Each level is provided with tram roads; the cars are pushed along by men to and from the shafts, where the loaded rock is dumped into the skips. All along the drifts are immense timbers, set near together and reaching diagonally from one wall to the other. These timbers are called stalls or stulls, and serve the purpose of keeping the walls from coming together and closing the mine. With lagging thrown upon them, a platform is made for the rock falling from the stopes above, which platform also protects the workmen in the level and on the tramways. Most of the mining is now done with the steam drills and air compressors. The iron cars, or skips, into which the miners dump the ore-rock, hold several tons, and are held by large wire ropes, which pass over pulleys to the drum of the engine. The movements of these skips is regulated with great precision by bell signals, from under ground; and to the man at the drum the position of the skip, at any depth, is told by an ingenious little indicator. The skip come up out of the mine to the top of the shaft, which is carried from twenty to thirty feet above the ground for convenience in handling the rock, dumps itself, and returns whence it came. The skip dumps its load into a car resting on a horizontal tram road, which car, moved by an endless rope, moves off at a considerable speed to the rock-breaking house, where it dumps itself and immediately returns to its proper position. The rock from each shaft has the same common destination, the great receiving rock house. There the large blocks of copper-tied conglomerate are first crushed under a ponderous steam hammer; it operates vertically in slides, and has the lower end beveled off. The motive power is a steam cylinder on top. Broken by this great hammer the pieces of rock fall into a number of large and small Blake rock-breakers, whose corrugated iron jaws crunch them up remorselessly. From these breakers the comminuted conglomerate falls into shutes, and from these it is drawn into cars. A train of cars, drawn by a locomotive engine, moves off to the stamp mill, where the copper rock is dumped into large bins placed at the top of the mill. The stamps now begin their work of further reduction; the rock is thrown into the hoppers of the great steam stamp, which strikes a blow of many tons eighty times a minute, smashing the rock into minute pebbles, fine sand and slime, which is washed from under the head by a stream of water, and carried by the same agent to the washers set on an inclined floor, where, by a process of jigging, in fresh supplies of water, the gravel and sand are separated from the freed copper, which, owing to its greater specific gravity, settles to the bottom on the sieves, while the sand is carried over the apron to the waste launder and is washed out into the lake. The copper rock is subjected to repeated washings, and even the fine slimes are carefully treated upon slime tables. Yet quite a percentage of fine copper goes to waste in spite of the most ingenious contrivances to save it. The mineral, or washed copper, having been graded, is packed into barrels and sent to the smelting works, where, passing through fire, it is purified from all rock remaining, and cast into ingots, bolts, bars and cakes."

That section where a mine is situated and operated, is called in miners'

parlance "the location," which really means a mine village. A description of one mine location is nearly a description of all, so far as relates to general features and social conditions. In the vicinity of the mine are the dwellings, generally cheaply constructed, some of logs and others frame. These are rented by the company to their employes. Occasionally a miner owns his own home. A few own the house they live in but not the ground upon which the building is erected. The companies will not sell land but lease building lots to their employes for a term of five years, with the privilege of renewing, under certain conditions. They charge a ground rent for the land. When a man leaves the employ of the mining corporation he must sell his dwelling to the company. For the purpose of determining its value appraisers are appointed. So those who are employed in the mining industry are not home owners.

With few exceptions the returns of our canvassers show that the men enjoy good health; 2,973 men said that they had good health, and two reported better health than when they began work. Only 95 reported poor health. The replies of the latter were as follows: Poor 53, fair 19, bad 10, not good 5, sickly 4, medium 2, very poor 1, and 1 delicate.

Situated as the mines are in the northern peninsula, where the air is pure and invigorating, the conditions are naturally favorable for healthy communities. It would seem from the nature of the work as if mining proper would injure the health, as all of the mines are wet and the miners are exposed to the dripping water and dampness. They are always well protected with rubber and oil cloth suitings and reported their health as being good when our canvass was made.

The water used for domestic purposes is obtained from wells, and on some of the locations is not very good. In the spring the occupants of all the dwellings are required to rake up the rubbish in their yards and clean up the winter's accumulation of garbage, which is carted away by the company's teamsters. With this exception but little attention is given to sanitary conditions. There is no sewerage system, but the lay of the ground is generally such that the natural drainage is sufficient to carry off the surface water. In some of the townships the mine physician is the health officer. For the safety and health of the men who work under the ground every precaution has been taken. The mines are well supplied with fresh air. The mode of ingress and egress is the man engine. In copper mining there is no danger from gas explosions as there is in coal mines. There is an occasional accident from blasting or from falling rock. For blasting purposes the common black powder is no longer used. Hercules or giant powder has been substituted in its place.

In the Calumet and Hecla experienced men are employed to do all of the blasting. Some of the miners claim that this system lessens the danger and is an improvement over the old way of allowing each man to fire his own blast, while others claim to the contrary. We received a report from nine mines, and in eight there were twenty-five men killed during the year. Eight were caused by falling rock, five by falling in the mine, four by riding in the skip, and the cause of six was not reported.

Every county has a mine inspector, whose duty it is to visit each copper mine at least once a year, and oftener if in his judgment necessary. The inspector is appointed by the board of supervisors. Of the ten supervisors in Houghton county three are mine superintendents and three clerks in the

office of mining companies. The appointment should be made by the governor. The law should also be further amended, making it obligatory upon mine inspectors to report the details of all accidents to this bureau, and it would better serve the purpose for which the office was created if all mine inspectors were under the control of the Commissioner of Labor, as are the factory inspectors in other States.

Every company has a mine physician; some two or more, according to the number of men employed. The Calumet and Hecla has six in its service. The mine physician is paid a regular salary by the employés of the mine, the sum being deducted every month from their wages. The amount varies at different mines. About the usual sum is \$1 per month for married men and fifty cents for single men. This entitles them and their families to free medicine and medical attendance in case of sickness or accident. The company appoints the physician, the men having no voice in the selection. At some of the mines the men are provided with nurses; at others the sitting up with and care of the sick is by volunteers from among their fellow workmen. The Calumet and Hecla and the Tamarack and Osceola have hospital buildings where the employés are furnished with comfortable quarters, nurses and medical attendance when sick or injured. The Calumet and Hecla hospital is in Calumet. The Osceola and Tamarack use the same hospital, which is on the Osceola, located at Opechee. The Calumet and Hecla has a system of relief known as the Employés' Aid Fund, which is, as the name implies, an aid and not an insurance fund. All employés who desire contribute 50 cents a month, whether married or single. Boys who earn less than \$30 per month contribute 25 cents a month, and are entitled to half benefits. To the amount contributed by the men the company add an equal sum. Last year the men contributed to the fund \$15,443, and the company contributed the same, making a total of \$30,886. The fund also received from other sources \$2,714.14. When a contributing member is sick, or is disabled by accident while in the employ of the company, he receives \$25 a month, but for no longer a time continuously than eight months. In case of death by accident while at work the family of deceased receive \$500. If crippled partially but permanently in one limb, he receives \$300. No relief is paid in case of death by sickness. The company treasurer is also treasurer of the fund. All applications for aid must be made to a committee, consisting of the mine physician longest in office, the chief mining captain and one miner to be chosen by the two former. Their decision is final in all cases. The fund paid out in aid for the year ending May 1, 1888, \$34,839.19. The fund now amounts to \$62,073.76.

No reading rooms or libraries are provided by the companies for their men. The Calumet and Hecla has a reading room for its office employés. The township libraries supply the demands of those who have any inclination for reading. The educational work is carried on through the public or district schools.

Almost all nationalities are employed in the mines except Chinese and colored men. The nationalities are: American, 631; English, 652; Finlanders, 386; Canadian (nearly all French), 330; Germans, 221; Irish, 210; Austrians, 156; Polanders, 120; Swedes, 104; Norwegians, 103; Italians, 61; Scotchmen, 51; Swiss, 14; French, 13; Welsh, 6; Nova Scotia, 4; Hollanders, 3; Danes, 2; Russia, 1; Spain, 1; Australia, 1; total, 3,070. Many of the mine superintendents and nearly all of the captains and bosses

are Cornishmen. They are the natural born miners. There is no American labor employed in the copper mines, or in fact in any of the industries treated upon in this report. Of the 3,070 men employed in the copper industry, 2,439 are foreigners, and 631 were born in the United States. Of these 631 the parentage of 71 is not reported; 475 are children of foreign parents and only 82 are children of American parents. Of the 475 children of foreigners, 175 had English parents, 143 Irish, 94 German, 32 Canadian, 7 Swiss, 7 Scotch, 5 French, 4 Poland, 4 Swede and 4 Norwegian.

The prevailing religious sentiment is Methodist, Lutheran and Catholic. The membership of the Methodist church is composed almost entirely of the English or Cornish people. The Finns, Swedes and Norwegians are Lutherans. The Irish, Italians, Germans, French Canadians, Polanders and Austrians are Catholics. Some of the Germans and Italians are free-thinkers.

The Temple of Honor, Good Templars and other temperance organizations have lodges in the mining section, and are creating a temperance sentiment. The membership of these societies is made up principally of English, Finns, Swedes and Norwegians. The drinking habit is a prevailing vice, and yet it is no worse than in the manufacturing towns in southern Michigan. I have seen more disorderly conduct and more drunkenness on a Saturday night in lower peninsula cities than I saw in a three weeks' sojourn in the copper mining district. No saloons are allowed upon any of the mining locations, but the men buy their liquor in the towns.

Many of the men are members of fraternal organizations, such as the Sons of St. George, Foresters, Ancient Order of Hibernians, A. O. U. W., Odd Fellows and kindred societies, and derive many social advantages from their connection therewith. There are no labor unions of any kind among the men, as it is understood that the mining companies are opposed to labor organizing.

A few of the more thrifty and prudent have provided for their families by life insurance—only 369 out of a total of 3,070.

In the copper industry the men have employment all the year round, and there is no suspension of work during the winter season as in the iron mines. The miners work by contract, so much per cubic fathom—the old Cornish mode of mining. The old system of hammer and hand drill has been done away with, and the steam drill substituted. This very much lessens the manual labor of the miners, and one superintendent affirms, prolongs his life at least ten years. The miners pay for their own powder, fuse and steel. In the past no boys have been employed in the copper mines, as there was no work that they could do. A good many are now employed as tool boys. Boys, to some extent, are also employed in the stamp mills. They all claim to be over 14 years of age.

The pay days at all of the mines are monthly, when the men receive cash. At two or three of the mines there is a store on the location, where the men trade; the amount deducted monthly and the balance paid in cash. There is now no scrip or order system in vogue.

A few facts not appearing in the general summary are noted here: Of the 3,070 employes, 129 take a monthly newspaper or magazine, 971 a weekly and 179 a daily. Twenty-six families own a piano, 228 an organ and 1,344 a sewing machine. The children of 45 families only earned wages during the year, which amounted to a total sum of \$13,438. To the question: Are you as

well off as five years ago? only 169 replied no. To the second question: If not, in what respect? 84 replied less pay, 15 sickness, 11 loss by fire, 2 financially, 27 less money, 4 larger family, 1 not so well, 5 in debt, 1 lost money that he had saved, 2 am older, 1 married now, 2 lost in speculation, 2 drinks, 2 in every respect, 1 poorer, 4 more to provide for, 2 hurt, 1 harder times and 2 bad luck. Only 452 own homes of their own, and of this number 28 are mortgaged for a total of \$10,380. There are 1,862 married men and they have 6,643 children, of which 2,365 attend school.

The canvassers appointed by this bureau for the Ontonagon district failed to do their work, and our report contains nothing from that county. From Keweenaw county we received a canvass of the Copper Falls, Allouez and Central mines. In Houghton county the following mines were canvassed: Quincy, Franklin, Huron, Atlantic, Calumet and Hecla, Osceola, Tamarack and Kearsarge, the smelting works at Hancock and the smelting works and stamp mills on Torch Lake. There are employed by the above companies, according to figures furnished us from their offices, a total of 5,516 men. Of this number we secured a canvass of 3,070, of which 573 were imperfect and are excluded from table No. 7, which contains 2,497 names. This written summary, however, was made from the total of 3,070 names, the questions herein referred to being all properly answered.

The following table comprises statistics from the nine mining companies reporting to this office, relating to capital invested, number of men employed, aggregate wages paid, copper produced, value, etc.

Name of Mine.	Location.— County.	Capital Invested.	How long in op- eration.	Number of men employed.	Aggregate Wages paid.	Copper Produced.		Cash value of Copper.	Expenses other than labor.	No. killed and fatally injured.
						Tons.	Lbs.			
Central.....	Keweenaw..	\$100,000	27	200	\$126,869 29	1,219	1,300	\$238,045 41	\$68,421 77	....
Copper Falls....	Keweenaw..	.....	43	226	48,504 63	340	226	.....	28,806 65	2
Quincy.....	Houghton...	200,000	40	447	245,807 89	3,371	1,510	658,369 94	145,025 18	1
Franklin.....	Houghton...	220,000	33	399	249,042 32	1,957	1,838	486,124 03	148,973 88	2
Atlantic.....	Houghton...	960,000	20	399	231,237 74	1,820	1,865	449,504 38	88,625 74	2
Huron	Houghton...	500,000	28	331	214,659 89	741	323	77,878 76	65,920 80	5
Tamarack	Houghton...	1,250,000	6	350	185,898 00	2,318	521	474,614 68	115,000 00	5
Cal'met & Hecla	Houghton...	2,500,000	17	2,500	.....	23,008	123	4,601,612 80	.....	6
Osceola	Houghton...	1,250,000	14	500	.....	1,791	1,723	424,886 85	.....	2

TABLE NO. 7.—Statistics of the Copper Industry.

Occupation.	Line number.	Age.	Native.	Nativity of parents.	How long in U. S., if foreign born.—(Years.)	Married or single.	How many children in family.	How many attend school.	How many depend on you for support.	How many years at present occupation.	How long with present employer.—(Years.)	Number of months employed during year.	How many hours for a day's work.	Wages paid.	Annual earnings.	Are you paid cash or trade.	How often are you paid.	Amount saved during the year.	How do wages compare with former years in this country.	What occupation did you follow in the old country.	Wages received in the old country.
Miner	1 41	Canada	Canada	Canada	25	m	7	8	7	3	3 yrs	12	10	\$48 00 pr m	\$576 00	c	m		same	farming	board
"	2 16	U. S.	Germany	Germany	83	s	7	2	7	2	18	6	10	35 00	210 00	c	m		less	not ans'd	not ans'd
"	3 40	Germany	Ireland	Ireland	24	m	6	5	7	25	19	12	10	48 00	576 00	c	m	\$120	better	not ans'd	not ans'd
"	4 41	Ireland	"	"	25	m	9	3	4	17	8	11	10	52 00	572 00	c	m		same	not ans'd	not ans'd
"	6 37	"	"	"	18	m	6	2	7	16	16	12	10	50 00	600 00	c	m		less	farming	\$12 00 per mo
"	7 35	England	England	England	15	m	2	2	8	15	5	12	10	48 00	576 00	c	m	150	better	mining	15 00 "
"	8 21	U. S.	U. S.	U. S.	18	s	1	1	1	5	5	8	10	50 00	400 00	c	m	200	better	not ans'd	not ans'd
Blacksmith	9 28	Ireland	Ireland	Ireland	16	m	5	2	4	13	13	12	10	60 00	720 00	c	m	175	same	shoemaker	don't know
"	10 35	"	"	"	15	m	4	5	5	1	2	12	10	65 00	780 00	c	m	200	better	blacksmith	20 00 per mo
"	11 28	U. S.	Germany	Germany	15	m	7	5	8	20	12	12	10	69 00	828 00	c	m	150	less	farming	15 00 "
Blacksmith helper	12 40	Germany	Canada	Canada	2 m	s				1	1	11 1/2	10	45 00	528 75	c	m		not ans'd	"	15 00 "
Laborer	13 21	Canada	"	"	8	s				2 m	2 mo	6 1/2	10	38 00	76 00	c	m		not ans'd	laborer	26 00 "
"	15 28	"	"	"	8	m				1	10 1/2 yrs	12	10	39 00	253 50	c	m		same	farming	not ans'd
"	16 17	"	"	"	8	s	10	3	5	1	1	12	10	15 00	180 00	c	m	*	same	farming	not ans'd
"	17 49	"	"	"	8	s				7	7	12	10	45 00	540 00	c	m	450	better	not ans'd	not ans'd
"	18 22	"	"	"	8	s				5	5	12	10	47 00	564 00	c	m	250	better	farming	12 00 per mo
"	19 24	"	"	"	8	s				6	6	12	10	60 00	720 00	c	m	200	not ans'd	farming	not ans'd
"	20 26	"	"	"	8	s				5	5	12	10	40 00	480 00	c	m	200	same	not ans'd	not ans'd
"	21 12	"	"	"	1	m	2	1	3	1	1	12	10	39 00	468 00	c	m	50		farming	15 00 per mo
"	22 58	Ireland	Ireland	Ireland	18	m	7	3	7	1	1	12	10	50 00	600 00	c	m		same	"	+
"	23 34	Germany	Germany	Germany	7	s				1	1	12	10	50 00	600 00	c	m	200	not ans'd	factory	11 00 per mo
"	24 32	England	England	England	24	m	3	1	4	8	8	12	10	40 00	480 00	c	m	200	same	farming	8 00 "
"	25 52	U. S.	"	"		s	2	1	4	1	1	12	10	39 00	468 00	c	m	75	"	mining	15 00 "
"	26 38	"	"	"		m				17 1/2	17	12	10	53 00	636 00	c	m	200	"		
"	28 20	"	"	"	16	s				5	5	12	10	50 00	600 00	c	m	300	not ans'd	not ans'd	not ans'd
Machinist	29 19	England	England	England	12	s				8	8	11 1/2	10	30 00	360 50	c	m		same	not ans'd	not ans'd
"	30 22	U. S.	Holland	Holland	12	m	5	2	6	3 m	2 mo	12	10	40 00	480 00	c	m		less	engineer	not ans'd
"	31 38	Germany	Germany	Germany	6	s				12	8 yrs	10 1/2	10	65 00	780 00	c	m		same	machinist	20 00 per mo
"	32 24	Canada	Canada	Canada	1	s				8	8	12	10	40 00	480 00	c	m	300	same		

Country	Age	Sex	Height	Weight	Complexion	Build	Education	Experience	Occupation	Wage	Notes
Germany	7	m	5 4	125	fair	medium	1	1	miner	25 00 per mo	not ans'd
Canada	20	m	5 4	125	fair	medium	1	1	carpenter	20 00 per mo	not ans'd
England	20	m	5 4	125	fair	medium	1	1	farmer	20 00 per mo	not ans'd
Canada	15	m	5 4	125	fair	medium	1	1	farmer	20 00 per mo	not ans'd
"	33	m	5 4	125	fair	medium	1	1	miner	20 00 per mo	not ans'd
Ireland	...	s	...	...	...	...	...	...	miner	20 00 per mo	not ans'd
Germany	30	m	5 4	125	fair	medium	1	1	miner	20 00 per mo	not ans'd
England	...	m	...	...	...	...	...	...	miner	20 00 per mo	not ans'd
Scotland	9	m	5 4	125	fair	medium	1	1	miner	20 00 per mo	not ans'd
Germany	12	m	5 4	125	fair	medium	1	1	miner	20 00 per mo	not ans'd
"	4	m	5 4	125	fair	medium	1	1	miner	20 00 per mo	not ans'd
"	8	s	...	...	...	...	...	...	miner	20 00 per mo	not ans'd
"	1	m	5 4	125	fair	medium	1	1	miner	20 00 per mo	not ans'd
Scotland	2	m	5 4	125	fair	medium	1	1	miner	20 00 per mo	not ans'd
Ireland	15	m	5 4	125	fair	medium	1	1	miner	20 00 per mo	not ans'd
Scotland	22	m	5 4	125	fair	medium	1	1	miner	20 00 per mo	not ans'd
Canada	...	m	...	...	...	...	...	...	miner	20 00 per mo	not ans'd
Germany	6	s	...	...	...	...	...	...	miner	20 00 per mo	not ans'd
"	9	s	...	...	...	...	...	...	miner	20 00 per mo	not ans'd
"	2	s	...	...	...	...	...	...	miner	20 00 per mo	not ans'd
"	9	m	5 4	125	fair	medium	1	1	miner	20 00 per mo	not ans'd
Canada	2	s	...	...	...	...	...	...	miner	20 00 per mo	not ans'd
Germany	2	m	5 4	125	fair	medium	1	1	miner	20 00 per mo	not ans'd
U. S.	...	s	...	...	...	...	...	...	miner	20 00 per mo	not ans'd
Ireland	35	m	5 4	125	fair	medium	1	1	miner	20 00 per mo	not ans'd
"	...	s	...	...	...	...	...	...	miner	20 00 per mo	not ans'd
Canada	1	m	5 4	125	fair	medium	1	1	miner	20 00 per mo	not ans'd
Scotland	7	s	...	...	...	...	...	...	miner	20 00 per mo	not ans'd
"	9	m	5 4	125	fair	medium	1	1	miner	20 00 per mo	not ans'd
Canada	2	m	5 4	125	fair	medium	1	1	miner	20 00 per mo	not ans'd
"	1	s	...	...	...	...	...	...	miner	20 00 per mo	not ans'd
"	10	m	5 4	125	fair	medium	1	1	miner	20 00 per mo	not ans'd
Switz.	24	m	5 4	125	fair	medium	1	1	miner	20 00 per mo	not ans'd
England	...	s	...	...	...	...	...	...	miner	20 00 per mo	not ans'd
"	...	s	...	...	...	...	...	...	miner	20 00 per mo	not ans'd
"	...	s	...	...	...	...	...	...	miner	20 00 per mo	not ans'd
"	...	s	...	...	...	...	...	...	miner	20 00 per mo	not ans'd
Drill boy	...	s	...	...	...	...	...	...	miner	20 00 per mo	not ans'd

* Give wages to parents.

+ Worked for himself.

TABLE No. 7.—Continued.

Occupation.	Line number.	How many hours for a day's work in the old country.	Amount of money at interest or in the bank.	If foreign born, how much money did you have on arrival in U. S.	Do you own your home. If so, its value.	If mortgaged, amount of mortgage.	Rate of interest.	Are you as well off as five years ago.	Loss of time.			If renting home, monthly rental.	If boarding, cost per week, including room.	Life insurance, how much.	Do you belong to a benevolent society.	Weekly benefit in case of sickness or accident.	Have you a sewing machine.	Have you a piano.	Have you an organ.	Do you take a newspaper.			Age began work.	State of health then.	State of health now.	Amount of relief rendered friends in the old country.	Amount of money furnished to friends for passage to U. S.
									From sickness.—(Days.)	Inability to obtain work.—(Days.)	Causes not stated.—(Days.)									Daily.	Weekly.	Monthly.					
Miner	1	1	1	1	no	1	1	yes	156	1	4 00	1	1	1	yes	6 00	yes	no	no	no	no	14	good	1	1		
"	2	1	1	1	\$1,500	1	1	yes	1	1	2 00	1	1	\$1,000	1	6 00	no	no	no	no	no	14	"	1	1		
"	3	1	1	1	no	1	1	1	1	1	3 00	1	1	1	1	6 00	1	1	1	yes	no	15	"	1	1		
"	4	1	1	1	1,200	1	1	1	26	1	3 00	1	1	1	1	6 00	1	1	1	no	yes	17	"	1	1		
"	5	1	1	1	700	1	1	1	1	1	3 00	1	1	1	1	6 00	1	1	1	no	no	16	"	1	1		
Blacksmith	6	8	\$1,000	1	no	1	1	1	1	1	8 00	1	1	1,000	1	6 00	no	no	no	yes	no	13	"	1	1		
"	7	8	200	1	no	1	1	1	1	1	8 00	1	1	1,000	1	6 00	yes	no	no	yes	no	15	"	1	1		
"	8	10	1,000	1	750	1	1	1	1	1	8 00	1	1	1	1	6 00	no	no	no	yes	no	16	"	1	1		
"	9	10	1	1	no	1	1	1	104	1	8 00	1	1	1	1	6 00	yes	no	no	yes	no	14	"	1	1		
"	10	10	1	1	no	1	1	1	1	1	8 00	1	1	1	1	6 00	no	no	no	yes	no	20	"	1	1		
"	11	10	1	1	no	1	1	1	1	1	4 00	1	1	1	1	6 00	1	1	1	yes	no	16	"	1	1		
"	12	12	1	1	800	1	1	1	6	1	4 00	1	1	1	1	6 00	yes	no	no	yes	no	15	"	1	1		
Blacksmith helper	13	12	1	1	no	1	1	1	1	1	4 00	1	1	1	1	6 00	no	no	no	yes	no	16	"	1	1		
Blacksmith	14	12	1	1	no	1	1	1	1	1	4 00	1	1	1	1	6 00	no	no	no	yes	no	18	"	1	1		
Blacksmith	15	10	1	1	no	1	1	1	144	1	4 00	1	1	1	1	6 00	1	1	1	yes	no	16	"	1	1		
"	16	12	1	1	no	1	1	yes	1	1	2 00	1	1	1	1	6 00	1	1	1	yes	no	16	"	1	1		
"	17	12	1	1	no	1	1	yes	1	1	2 00	1	1	1	1	6 00	yes	no	no	yes	no	12	"	1	1		
"	18	12	1	1	no	1	1	yes	1	1	2 00	1	1	1,000	1	6 00	no	no	no	yes	no	17	"	1	1		
"	19	12	1	1	no	1	1	yes	1	1	2 00	1	1	1	1	6 00	yes	no	no	yes	no	10	"	1	1		
"	20	12	1	1	no	1	1	yes	1	1	2 00	1	1	1	1	6 00	no	no	no	yes	no	20	"	1	1		
"	21	12	1	1	no	1	1	yes	1	1	2 00	1	1	1	1	6 00	1	1	1	yes	no	14	"	1	1		
"	22	12	1	1	no	1	1	yes	1	1	2 00	1	1	1	1	6 00	1	1	1	yes	no	16	"	1	1		
"	23	12	1	1	no	1	1	yes	1	1	2 00	1	1	1	1	6 00	1	1	1	yes	no	16	"	1	1		
"	24	12	1	1	no	1	1	yes	1	1	2 00	1	1	1	1	6 00	1	1	1	yes	no	16	"	1	1		
"	25	12	1	1	no	1	1	yes	1	1	2 00	1	1	1	1	6 00	1	1	1	yes	no	16	"	1	1		
"	26	12	1	1	no	1	1	yes	1	1	2 00	1	1	1	1	6 00	1	1	1	yes	no	16	"	1	1		
"	27	12	1	1	no	1	1	yes	1	1	2 00	1	1	1	1	6 00	1	1	1	yes	no	16	"	1	1		
"	28	12	1	1	no	1	1	yes	1	1	2 00	1	1	1	1	6 00	1	1	1	yes	no	16	"	1	1		
"	29	12	1	1	no	1	1	yes	1	1	2 00	1	1	1	1	6 00	1	1	1	yes	no	16	"	1	1		
"	30	12	1	1	no	1	1	yes	1	1	2 00	1	1	1	1	6 00	1	1	1	yes	no	16	"	1	1		
"	31	10	1	1	no	1	1	yes	19	1	4 50	1	1	1	1	6 00	no	no	no	yes	no	5	"	1	1		
"	32	10	1	1	no	1	1	yes	1	1	4 50	1	1	1	1	6 00	1	1	1	yes	no	15	"	1	1		
"	33	10	1	1	no	1	1	yes	1	1	4 50	1	1	1	1	6 00	1	1	1	yes	no	22	"	1	1		
"	34	10	1	1	no	1	1	yes	1	1	4 50	1	1	1	1	6 00	1	1	1	yes	no	14	"	1	1		
"	35	10	1	1	no	1	1	yes	1	1	4 50	1	1	1	1	6 00	1	1	1	yes	no	14	"	1	1		
"	36	10	1	1	no	1	1	yes	1	1	4 50	1	1	1	1	6 00	1	1	1	yes	no	14	"	1	1		
"	37	10	1	1	no	1	1	yes	1	1	4 50	1	1	1	1	6 00	1	1	1	yes	no	20	"	1	1		
"	38	10	1	1	no	1	1	yes	1	1	4 50	1	1	1	1	6 00	1	1	1	yes	no	14	"	1	1		
"	39	10	1	1	no	1	1	yes	1	1	4 50	1	1	1	1	6 00	1	1	1	yes	no	20	"	1	1		
"	40	10	1	1	no	1	1	yes	1	1	4 50	1	1	1	1	6 00	1	1	1	yes	no	20	"	1	1		
"	41	10	1	1	no	1	1	yes	1	1	4 50	1	1	1	1	6 00	1	1	1	yes	no	20	"	1	1		
"	42	10	1	1	no	1	1	yes	1	1	4 50	1	1	1	1	6 00	1	1	1	yes	no	20	"	1	1		
"	43	10	1	1	no	1	1	yes	1	1	4 50	1	1	1	1	6 00	1	1	1	yes	no	20	"	1	1		
"	44	10	1	1	no	1	1	yes	1	1	4 50	1	1	1	1	6 00	1	1	1	yes	no	20	"	1	1		
"	45	10	1	1	no	1	1	yes	1	1	4 50	1	1	1	1	6 00	1	1	1	yes	no	20	"	1	1		
"	46	10	1	1	no	1	1	yes	1	1	4 50	1	1	1	1	6 00	1	1	1	yes	no	20	"	1	1		
"	47	10	1	1	no	1	1	yes	1	1	4 50	1	1	1	1	6 00	1	1	1	yes	no	20	"	1	1		
"	48	10	1	1	no	1	1	yes	1	1	4 50	1	1	1	1	6 00	1	1	1	yes	no	20	"	1	1		
"	49	10	1	1	no	1	1	yes	1	1	4 50	1	1	1	1	6 00	1	1	1	yes	no	20	"	1	1		
"	50	10	1	1	no	1	1	yes	1	1	4 50	1	1	1	1	6 00	1	1	1	yes	no	20	"	1	1		
"	51	10	1	1	no	1	1	yes	1	1	4 50	1	1	1	1	6 00	1	1	1	yes	no	20	"	1	1		
"	52	10	1	1	no	1	1	yes	1	1	4 50	1	1	1	1	6 00	1	1	1	yes	no	20	"	1	1		
"	53	10	1	1	no	1	1	yes	1	1	4 50	1	1	1	1	6 00	1	1	1	yes	no	20	"	1	1		
"	54	10	1	1	no	1	1	yes	1	1	4 50	1	1	1	1	6 00	1	1	1	yes	no	20	"	1	1		
"	55	10	1	1	no	1	1	yes	1	1	4 50	1	1	1	1	6 00	1	1	1	yes	no	20	"	1	1		
"	56	10	1	1	no	1	1	yes	1	1	4 50	1	1	1	1	6 00	1	1	1	yes	no	20	"	1	1		
"	57	10	1	1	no	1	1	yes	1	1	4 50	1	1	1	1	6 00	1	1	1	yes	no	20	"	1	1		
"	58	10	1	1	no	1	1	yes	1	1	4 50	1	1	1	1	6 00	1	1	1	yes	no	20	"	1	1		
"	59	10	1	1	no	1	1	yes	1	1	4 50	1	1	1	1	6 00	1	1	1	yes	no	20	"	1	1		
"	60	10	1	1	no	1	1	yes	1	1	4 50	1	1	1	1	6 00	1	1	1	yes	no	20	"	1	1		
"	61	10	1	1	no	1	1	yes	1	1	4 50	1	1	1	1	6 00	1	1	1	yes	no	20	"	1	1		
"	62	10	1	1	no	1	1	yes	1	1	4 50	1	1	1	1	6 00	1	1	1	yes	no	20	"	1	1		
"	63	10	1	1	no	1	1	yes	1	1	4 50	1	1	1	1	6 00	1	1	1	yes	no	20	"	1	1		
"	64	10	1	1	no	1	1	yes	1	1	4 50	1	1	1	1	6 00	1	1	1	yes	no	20	"	1	1		
"	65	10	1	1	no	1	1	yes	1	1	4 50	1	1	1	1	6 00	1	1	1	yes	no	20	"	1	1		
"	66	10	1	1	no	1	1	yes	1	1	4 50	1	1	1	1	6 00	1	1	1	yes	no	20	"	1	1		
"	67	10	1	1	no	1	1	yes	1	1	4 50	1	1	1	1	6 00	1	1	1	yes	no	20	"	1	1		
"	68	10	1	1	no	1	1	yes	1	1	4 50	1	1	1	1	6 00	1	1	1	yes	no	20	"	1	1		
"	69	10	1	1	no	1	1	yes	1	1	4 50	1	1	1	1	6 00	1	1	1	yes	no	20	"	1	1		
"	70	10	1	1	no	1	1	yes	1	1	4 50	1	1	1	1	6 00	1	1	1	yes	no	20	"	1	1		
"	71	10	1	1	no	1	1	yes	1	1	4 50	1	1	1	1	6 00	1	1	1	yes	no	20	"	1	1		
"	72	10	1	1	no	1	1	yes	1	1																	

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[illegible]

I Refused.

TABLE No. 7.—Continued.

Occupation.	Line number.	Age.	Nativity.	Nativity of parents.	How long in U. S., if foreign born.—(Years.)	Married or single.	How many children in family.	How many attend school.	How many depend on you for support.	How many years at present occupation.	How long with present employer.—(Years.)	Number of months employed during year.	How many hours for a day's work.	Wages paid.	Annual earnings.	Are you paid cash or trade.	How often are you paid.	Amount saved during the year.	How do wages compare with former years in this country.	What occupation did you follow in the old country.	Wages received in the old country.
Drill boy.	1		England	England								12	10	\$22 00 pr m	\$284 00	c	m	*	same		
"	2		Ireland	Ireland								13	10	22 00	284 00	c	m	*	"		
"	3		U. S.	U. S.								12	10	22 00	284 00	c	m	*	"		
Laborer.	4		U. S.	U. S.								12	10	22 00	284 00	c	m	*	not answer'd		
"	5		U. S.	U. S.								12	10	40 00	430 00	c	m	\$200	same		
"	6		Switz'land	Switz'land								12	10	50 00	600 00	c	m	300	better		
"	7		Ireland	Ireland								12	10	50 00	600 00	c	m	300	same		
"	8		"	"								12	10	30 00	408 00	c	m	*	better		
"	9		"	"								12	10	30 00	408 00	c	m	*	less		
"	10		"	"								12	10	45 00	540 00	c	m	400	same	farmer	\$20 00 per mo
"	11		"	"								12	10	30 00	408 00	c	m	150	less	miner	10 00 "
"	12		England	England								12	10	55 00	660 00	c	m		"	"	17 60 "
"	13		"	"								8 1/2	10	40 00	150 00	c	m		"	"	15 00 "
"	14		Germany	Germany								12	10	20 00	408 00	c	m	75	same	not answer'd laborer	not answered
"	15		Canada	Canada								12	10	50 00	600 00	c	m		same		25 00 per mo
"	16		"	"								12	10	45 00	540 00	c	m		less	farmer	20 00 "
"	17		Sweden	Sweden								12	10	35 00	420 00	c	m	75	same	"	"
"	18		Ireland	Ireland								12	10	50 00	600 00	c	m		"	miner	15 00 per mo
Miner.	19		"	"								12	10	48 00	576 00	c	m	150	less	"	25 00 "
"	20		"	"								12	10	50 00	600 00	c	m	*	better	"	"
"	21		England	England								12	10	48 00	576 00	c	m	200	less	miner	20 00 per mo
"	22		Sweden	Sweden								12	10	54 00	648 00	c	m	200	higher	laborer	16 00 "
Lander.	23		Wales.	Wales.								12	10	75 00	900 00	c	m	ref'd	same	slate quarry	25 00 "
Blater.	24		Germany	Germany								12	10	47 00	564 00	c	m		less	"	"
Teamster.	25		"	"								12	10	53 00	636 00	c	m	300	same	painter	30 00 per mo
Painter.	26		England	England								12	10	78 00	900 00	c	m	350	"	"	"
Machinist.	27		"	"								12	10	40 00	480 00	c	m			sailor	don't know
Wiper.	28		"	"								12	10	45 00	540 00	c	m			"	"
Blacksmith	29		U. S.	U. S.								12	10	35 00	1,500 00	c	m	600	same	"	"
Surface box	30		"	"								12	10	150 00	1,800 00	c	m	600	"	"	"
Supply clerl	31		England	England								12	10	66 00	792 00	c	m	160	"	"	"
Tramster.	32		Poland.	Poland.								12	8	53 00	636 00	c	m	175	not answer'd	"	"

Drill boy	117 23	U. S.	Ireland	12	10	53 00	53 00	408 00	m	c	m	250	same			
"	118 14	"	England	1	10	53 00	53 00	32 00	m	c	m		not ans'w'd			
"	114 15	"	"	1 w	10	53 00	53 00	8 25	m	c	m		same			
"	115 16	"	"	1	10	53 00	53 00	38 00	m	c	m		"			
"	116 17	"	"	1 w	10	53 00	53 00	8 00	m	c	m		"			
Carpenter	117 40	"	U. S.	1	10	53 00	53 00	52 00	m	c	m		not ans'w'd	carpenter	20 00 per mo	
"	118 41	England	England	12	10	53 00	53 00	620 00	m	c	m		not so good	"	20 00	
"	119 39	"	"	12	10	53 00	53 00	624 00	m	c	m	75	same			
Brakeman	120 37	U. S.	Ireland	12	10	50 00	50 00	600 00	m	c	m	250	not ans'w'd	not ans'w'd	not answered	
"	121 36	Canada	Canada	12	10	50 00	50 00	600 00	m	c	m	250	higher			
Miner	122 35	Sweden	Sweden	12	10	48 00	48 00	576 00	m	c	m	100	less	"	"	
"	123 34	Germany	Germany	12	10	55 00	55 00	600 00	m	c	m	150	same			
"	124 42	"	"	12	10	55 00	55 00	600 00	m	c	m	300	same	farmer	10 00 per mo	
"	125 39	U. S.	England	12	10	50 00	50 00	600 00	m	c	m	300	less			
"	126 30	"	"	12	10	55 00	55 00	600 00	m	c	m		better			
"	127 21	"	"	12	10	48 00	48 00	576 00	m	c	m		same			
"	128 18	"	U. S.	12	10	48 00	48 00	576 00	m	c	m		"	miner	10 00 per mo	
"	129 42	Ireland	Ireland	12	10	55 00	55 00	600 00	m	c	m	300	"	farmer	10 00	
"	130 39	"	"	12	10	48 00	48 00	576 00	m	c	m		less	miner	15 00	
"	131 55	"	"	12	10	45 00	45 00	540 00	m	c	m	120	not so good			
"	132 35	"	"	12	10	55 00	55 00	600 00	m	c	m	150	same	miner	15 00 per mo	
"	133 45	England	England	12	10	50 00	50 00	600 00	m	c	m	200	less	"	15 00	
"	134 35	"	"	12	10	55 00	55 00	600 00	m	c	m	300	same	"	15 00	
"	135 42	"	"	12	10	55 00	55 00	600 00	m	c	m		"	"	15 00	
"	136 45	"	"	12	10	50 00	50 00	600 00	m	c	m	300	"	"	15 00	
"	137 29	"	"	12	10	50 00	50 00	600 00	m	c	m	175	not ans'w'd	"	15 00	
"	138 30	"	"	12	10	48 00	48 00	576 00	m	c	m	150	less	miner	20 00 per mo	
"	139 57	"	"	12	10	48 00	48 00	576 00	m	c	m		"	laborer	15 00	
"	140 50	"	"	11 1/2	10	48 00	48 00	552 00	m	c	m		"	miner	15 00	
"	141 27	"	"	12	10	48 00	48 00	576 00	m	c	m	300	"	miner	15 00	
Laborer	142 42	"	Sweden	12	10	39 00	39 00	468 00	m	c	m		"	laborer	15 00	
"	143 55	Sweden	Sweden	12	10	39 00	39 00	468 00	m	c	m		same	"	21 00	
"		"	"	1 w	10	39 00	39 00	9 75	m	c	m		"			
"		"	"	12	10	36 00	36 00	420 00	m	c	m		not ans'w'd			
"		"	"	1	10	39 00	39 00	32 00	m	c	m		same			
"		"	"	12	10	39 00	39 00	468 00	m	c	m		less	miner	25 00 per mo	
"		"	"	10 1/2	10	39 00	39 00	468 00	m	c	m		"	"	25 00	
"		"	"	6 1/2	10	45 00	45 00	540 00	m	c	m	300	same	teaming	25 00	
"		"	"	6 1/2	10	40 00	40 00	260 00	m	c	m		less	farming	9 00	
"		"	"	12	10	55 00	55 00	660 00	m	c	m	240	better			
"		"	"	6	10	35 00	35 00	210 00	m	c	m		lower	cooper	12 00 per mo	
"		"	"	12	10	45 00	45 00	540 00	m	c	m	100	same	farmer	10 00	
"		"	"	12	10	45 00	45 00	540 00	m	c	m		"	"	13 00	
"		"	"	1	10	39 00	39 00	39 00	m	c	m		"	not ans'w'd	not answered	
"		"	"	12 1/2	10	55 00	55 00	660 00	m	c	m		"	"		

* His father takes his wages.

TABLE No. 7.—Continued.

Occupation.	Line Number.	How many hours for a day's work in the old country.	Amount of money at in- terest or in the bank.	If foreign born, how much money did you have on arrival in U. S.	Do you own your home. If so, its value.	If mortgaged, amount of mortgage.	Rate of interest.	Are you as well off as five years ago.	Loss of time.			If renting home, monthly rental.	If boarding, cost per week, including room.	Life insurance, how much.	Do you belong to a bene- fit society.	Weekly benefit in case of sickness or accident.	Have you a sewing ma- chine.	Have you a piano.	Have you an organ.	Do you take a newspaper.			Age began work.	State of health then.	State of health now.	Amount of relief ren- dered friends in the old country.	Amount of money fur- nished to friends for passage to U. S.
									From sickness.— (Days.)	Inability to obtain work.—(Days.)	Causes not stated. (Days.)									Daily.	Weekly.	Monthly.					
Drill boy	79				no			yes				\$3 00			yes	6 00	no	no	no	no	no	16	good	good			
"	80				"			yes							"	6 00	"	"	"	"	"	13	"	"			
"	81				"			"							"	6 00	"	"	"	"	"	15	"	"			
Laborer	82				"			yes				4 50			"	6 00	"	"	"	"	"	16	"	"			
"	83				"			"				4 50			"	6 00	"	"	"	"	"	14	"	"			
"	84				"			"				4 50			"	6 00	"	"	"	"	"	16	"	"			
"	85				"			yes							"	6 00	yes	"	"	"	"	20	"	"			
"	86				"			"							"	6 00	"	"	"	"	"	9	"	"			
"	87				"			"							"	6 00	"	"	"	"	"	10	"	"			
"	88				"			"							"	6 00	"	"	"	"	"	12	"	"			
"	89				"			"							"	6 00	"	"	"	"	"	12	"	"			
"	90				"			"							"	6 00	"	"	"	"	"	12	"	"			
"	91				"			"							"	6 00	"	"	"	"	"	13	"	"			
"	92				"			"							"	6 00	yes	"	"	"	"	13	"	"			
"	93				"			"							"	6 00	"	"	"	"	"	12	"	"			
"	94				"			"							"	6 00	"	"	"	"	"	13	"	"			
Miner	95				"			yes				4 50			"	6 00	no	"	"	"	"	12	"	"			
"	96				"			"							"	6 00	yes	"	"	"	"	13	"	"			
"	97				"			"							"	6 00	"	"	"	"	"	12	"	"			
"	98				"			yes							"	6 00	no	"	yes	"	"	14	"	"			
"	99				"			"							"	6 00	yes	"	"	"	"	"	"	"			
Lander	100				"			"				4 50			"	6 00	no	"	"	"	"	16	"	"			
Slater	101				"			"							"	6 00	yes	"	"	"	"	18	"	"			
Teamster	102				"			"							"	6 00	"	"	"	"	"	13	"	"			
Painter	103				"			"							"	6 00	"	"	"	"	"	15	"	"			
Machinist	104				"			"							"	6 00	"	"	yes	"	"	18	"	"			
Wiper	105				"			"							"	6 00	no	"	no	"	"	"	"	"			
Blacksmith help'r	106				"			yes							"	6 00	"	"	"	"	"	13	"	"			
Surface boss	107				1,800			"							"	12 00	yes	yes	"	"	"	16	"	"			
Supply clerk	108				no			"							"	12 00	"	"	"	"	"	18	"	"			
"	109				"			"				5 00			"	6 00	no	no	"	"	"	18	"	"			
Tramman	110				"			"							"	6 00	yes	"	"	"	"	14	"	"			
"	111				"			"							"	6 00	yes	"	"	"	"	16	"	"			

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[illegible]

TABLE No. 7.—Continued.

Occupation.	Line number.	Age.	Nativity.	Nativity of parents.	How long in U. S., if foreign born.—(Years.)	Married or single.	How many children in family.	How many attend school.	How many depend on you for support.	How many years at present occupation.	How long with present employer.—(Years.)	Number of months employed during year.	How many hours for a day's work.	Wages paid.	Annual earnings.	Are you paid cash or trade.	How often are you paid.	Amount saved during the year.	How do wages compare with former years in this country.	What occupation did you follow in the old country.	Wages received in the old country.
Laborer.....	157 43	U. S.	U. S.	U. S.	24	m	2	2	4	6	6 yrs	12	10	\$40 00 pr m	\$480 00	c	m	.....	same	farmer	not answered
".....	158 41	Canada	Canada	Canada	5	m	3	2	4	4	4	12	10	60 00 "	720 00	c	m	\$300	"	"	\$18 00 per mo
Engineer.....	159 21	Ireland	Ireland	Ireland	14	s	6	4	7	15	15	12	10	53 00 "	636 00	c	m	700	better	not ans w'd	not answered
Drill boy.....	160 42	Norway	Norway	Sweden	14	s	6	4	7	1	1	12	10	33 00 "	396 00	c	m	.....	.....	.....	.....
".....	161 17	U. S.	U. S.	England	7	s	.....	.....	.....	1	1 mo	1	10	32 00 "	384 00	c	m	.....	same	farmer	18 00 per mo
Miner.....	162 17	Austria	Austria	Austria	6 m	s	.....	.....	.....	4	6	12	8	55 00 "	660 00	c	m	.....	not ans w'd	"	18 00 "
".....	163 23	Finland	Finland	Finland	8	m	3	.....	4	10	3 yrs	12	10	55 00 "	660 00	c	m	240	same less	.....	5 00 "
".....	164 23	England	England	England	10	s	.....	.....	.....	8	8	12	10	48 00 "	576 00	c	m	.....	.....	.....	.....
".....	165 32	Sweden	Sweden	Sweden	15	m	5	3	6	27	9	12	10	60 00 "	720 00	c	m	150	same	miner	15 00 per mo
".....	166 36	Sweden	Sweden	Sweden	15	m	7	3	7	16	15	12	10	48 00 "	576 00	c	m	+	"	carpenter	20 00
".....	167 38	U. S.	U. S.	Ireland	15	s	.....	.....	1	6	6	11	10	45 00 "	495 00	c	m	.....	"	farmer	12 00 per mo
Blacksmith.....	168 40	Canada	Canada	Canada	16	m	7	2	6	15	15	12	10	60 00 "	720 00	c	m	100	"	.....	.....
Oiler.....	169 21	U. S.	U. S.	Germany	.....	s	.....	.....	.....	2	2	12	10	42 00 "	504 00	c	m	.....	.....	.....	.....
".....	170 54	Germany	Germany	Germany	.....	s	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Machinist.....	171 18	Germany	Germany	Germany	.....	s	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Timberman.....	172 17	Germany	Germany	Austria	11	s	5	.....	.....	1	1 mo	1	10	40 00 "	40 00	c	m	+	higher	laborer	14 00 per mo
".....	173 23	Austria	Austria	Austria	5	m	.....	.....	6	8	8 yrs	10 1/2	10	48 00 "	504 00	c	m	250	same	farmer	10 00 "
Teamster.....	174 28	Canada	Canada	Canada	16	m	3	1	4	5	5	11 1/2	10	48 00 "	576 75	c	m	150	"	"	don't know
".....	175 35	"	"	"	12	m	5	2	6	3	8	12	10	47 00 "	564 00	c	m	120	"	teaming	not answered
".....	176 43	"	"	"	18	m	2	.....	8	13	13	12	10	47 00 "	564 00	c	m	125	"	.....	50 00 per mo
".....	177 23	England	England	England	30	m	3	.....	1	16	16	11 1/2	10	53 00 "	596 25	c	m	.....	not ans w'd	miner	15 00 "
Trammer.....	178 67	Finland	Finland	Finland	8	m	2	.....	3	5	5	12	10	53 00 "	636 00	c	m	200	same	farmer	13 00 "
".....	179 82	Austria	Austria	Austria	15	m	2	.....	.....	3	3	12	10	39 00 "	468 00	c	m	100	"	"	11 00 "
".....	180 50	"	"	"	9	s	.....	.....	.....	4	4	12	8	53 00 "	636 00	c	m	225	"	"	13 00 "
".....	181 29	"	"	"	1	s	.....	.....	.....	9	9	12	8	53 00 "	636 00	c	m	75	"	"	13 00 "
".....	182 32	"	"	"	1	s	.....	.....	.....	1	1	12	10	53 00 "	636 00	c	m	.....	.....	.....	15 00 "
".....	183 25	"	"	"	2	s	.....	.....	1	2	2	12	10	53 00 "	636 00	c	m	150	"	"	13 00 "
".....	184 32	"	"	"	1	s	.....	.....	.....	1	1	12	10	53 00 "	636 00	c	m	175	"	"	13 00 "
".....	185 26	"	"	"	1	s	.....	.....	.....	1	1	12	10	42 00 "	504 00	c	m	100	"	"	13 00 "
".....	186 28	"	"	"	1	s	.....	.....	.....	1	1	12	10	53 00 "	636 00	c	m	.....	.....	"	13 00 "
".....	187 30	"	"	"	1	s	.....	.....	.....	1	1	12	10	53 00 "	636 00	c	m	.....	.....	"	13 00 "
".....	188 21	"	"	"	1 m	s	.....	.....	.....	1 m	1 mo	1	6	53 00 "	636 00	c	m	.....	.....	"	13 00 "
".....	189 24	"	"	"	6 m	s	.....	.....	.....	6 m	6	6	8	53 00 "	318 00	c	m	.....	same	"	12 00 "

[illegible]† **Refused.**

* Father takes his wages.

TABLE NO. 7.—Continued.

Occupation.	Line number.	How many hours for a day's work in the old country.	Amount of money at interest or in the bank.	If foreign born, how much money did you have on arrival in U. S.	Do you own your home. If so, its value.	If mortgaged, amount of mortgage.	Rate of interest.	Are you as well off as five years ago.	Loss of time.			If renting home, monthly rental.	If boarding, cost per week, including room.	Life insurance, how much.	Do you belong to a benevolent society.	Weekly benefit in case of sickness or accident.	Have you a sewing machine.	Have you a piano.	Have you an organ.	Do you take a newspaper.			Age began work.	State of health then.	State of health now.	Amount of relief rendered friends in the old country.	Amount of money furnished to friends for passage to U. S.
									From sickness.—	(Days.)	Inability to obtain work.—									(Days.)	(Days.)	Daily.						Weekly.	Monthly.
Laborer.....	157		+		no			yes			\$3 00		\$2,000	yes	\$6 00	yes	no	yes	no	12	good	good					
Engineer.....	158	12	+		\$1,000			"				\$4 50			"	5 00	no	"	no	"	12	"	"	\$120			
Drill boy.....	159	10	+		"			"			3 00		1,000	"	6 00	yes	no	"	"	"	11	"	"				
"	160		+		"			"				4 00			"	6 00	no	"	"	"	14	"	"				
Miner.....	161			\$23	"			yes							"	6 00	"	"	"	"	15	"	"				
"	162		+	8	"			"				4 50			"	6 00	"	"	"	"	14	"	"				
"	163	13		8.40	"			"			8 50			"	11 00	yes	"	"	yes	"	12	"	"				
"	164				"			"				4 50			"	6 00	no	"	"	"	14	"	"				
"	165		+		"			"							"	6 00	"	"	"	"	15	"	"				
"	166				"			"							"	6 00	"	"	"	"	15	"	"				
"	167	8		30	"			"			4 00		1,000	"	6 00	yes	"	"	"	"	9	"	"				
"	168	10		17	325			"			4 00			"	6 00	no	"	"	no	"	15	"	"		50		
Blacksmith.....	169		+	21	no			yes		26	2 00		1,000	"	6 00	"	"	"	"	"	15	"	"				
Oiler.....	170				"			"							"	6 00	"	"	"	"	15	"	"				
"	171				"			"							"	6 00	"	"	"	"	15	"	"				
Machinist.....	172		+		"			yes		39					"	6 00	"	"	"	"	12	"	"				
Timberman.....	173	10	+	19	900			"			4 00			"	6 00	yes	"	"	"	"	12	"	"				
"	174				no			"			3 00			"	12 00	no	"	"	yes	"	12	"	"				
Teamster.....	175	10	+	25	"			"		18	3 00			"	6 00	yes	"	"	no	"	12	"	"				
"	176	10	+		"			"			2 00			"	6 00	"	"	"	yes	"	15	"	"		75		
"	177	10	+		"			"							"	6 00	"	"	"	"	15	"	"				
Trammer.....	178	8	+		"			"		18	5 00			"	5 00	"	yes	no	"	"	10	"	"				
"	179		+		330			"						"	6 00	"	no	"	"	"	12	"	"				
"	180			17	no			"				4 00			"	6 00	no	"	yes	"	16	"	"				
"	181		+	25	"			"				4 50			"	6 00	"	"	no	"	12	"	"				
"	182		\$1,150	25	"			"				4 50			"	6 00	"	"	"	"	12	"	"				
"	183			14	"			"				4 50			"	6 00	"	"	"	"	14	"	"				
"	184		+	30	"			"				4 50			"	6 00	"	"	"	"	15	"	"		100		
"	185			5	"			"				4 50			"	6 00	"	"	"	"	13	"	"				
"	186			6	"			"				4 50			"	6 00	"	"	"	"	13	"	"				
"	187			23	"			"				4 50			"	6 00	"	"	"	"	14	"	"		50		
"	188			14	"			"				4 50			"	6 00	"	"	"	"	14	"	"				
"	189			12	"			"				4 50			"	6 00	"	"	"	"	14	"	"				

LABOR AND INDUSTRIAL STATISTICS.

TABLE No. 7.—Continued.

Occupation.	Line number.	Age.	Nativity.	Nativity of parents.	How long in U. S., if foreign born.—(Years.)	Married or single.	How many children in family.	How many attend school.	How many depend on you for support.	How many years at present occupation.	How long with present employer.—(Years.)	Number of months employed during year.	How many hours for a day's work.	Wages paid.	Annual earnings.	Are you paid cash or trade.	How often are you paid.	Amount saved during the year.	How do wages compare with former years in this country.	What occupation did you follow in the old country.	Wages received in the old country.
Drill boy	236 13	13	U. S.	England	...	s	...	...	1	1	1 yr	12	10	\$32 00 pr m	\$384 00	c	m	...	same	...	...
"	236 16	16	"	Ireland	...	s	...	...	...	1	1	12	10	24 00	236 00	c	m	...	not answ'd	...	...
"	237 16	16	"	"	...	s	...	...	...	1	1	12	10	32 00	334 00	c	m	*	"	...	...
"	238 16	16	"	"	...	s	...	...	...	1	1	12	10	32 00	334 00	c	m	*	"	...	...
"	239 15	15	"	"	...	s	...	...	...	1	1	12	10	32 00	334 00	c	m	*	"	...	...
"	240 14	14	"	U. S.	...	s	...	...	...	1	1	12	10	32 00	334 00	c	m	*	not answ'd	...	...
"	241 16	16	"	"	...	s	...	...	...	1	1	12	10	32 00	334 00	c	m	*	not answ'd	...	...
Blacksmith	242 29	29	Norway	Norway	...	m	1	...	2	2	1	12	10	30 00	840 00	c	m	\$480	same	blacksmith	\$12 00 per mo
Painter	243 53	53	"	"	7	m	9	2	8	36	7	12	10	52 00	624 00	c	m	200	"	painter	30 00 "
Brakeman	244 28	28	England	England	7	m	6	3	7	4	5	12	10	47 00	564 00	c	m	...	less	paper hanger	52 00 "
Mining Capt.	245 52	52	Prussia	Prussia	26	m	1	1	1	25	25	12	10	80 00	1,080 00	c	m	720	higher	miner	39 00 "
Car filler	246 40	40	Scotland	Scotland	33	m	8	4	8	4	11	12	10	48 00	576 00	c	m	...	less	...	...
Machinist	247 38	38	Germany	Germany	8	m	...	...	...	20	2	12	10	65 00	780 00	c	m	300	same	machinist	20 00 per mo
Carpenter	248 40	40	Ireland	Ireland	20	m	6	4	6	10	10	12	10	52 00	624 00	c	m	250	"	carpenter	25 00 "
Pump engineer	249 17	17	U. S.	Germany	...	s	...	...	...	1	1 mo	1	10	32 00	32 00	c	m	...	not answ'd	...	...
Trammer	250 22	22	Finland	Finland	1	s	...	...	...	1	1 yr	12	8	53 00	636 00	c	m	150	not answ'd	farmer	father
"	251 34	34	"	"	11	m	5	1	6	11	1	12	8	53 00	636 00	c	m	150	not answ'd	fisherman	don't know
"	252 35	35	Poland	Poland	7	m	3	...	4	7	7	12	10	53 00	636 00	c	m	300	same	laborer	b'd & clothes
"	253 50	50	"	"	40	m	5	...	6	10	10	12	8	53 00	636 00	c	m	125	"	laborer	20 00 per yr
"	254 31	31	"	"	7	m	2	...	3	5	3	12	10	53 00	636 00	c	m	230	...	farmer	board
"	255 18	18	Austria	Austria	1	s	...	...	...	1	1	12	10	50 00	600 00	c	m	...	...	...	...
"	256 20	20	"	"	3	m	...	...	...	3	3	12	8	53 00	636 00	c	m	250	same	"	20 00 per yr
"	257 22	22	"	"	2	s	...	...	...	2	2	12	8	53 00	636 00	c	m	225	"	"	20 00 "
"	258 20	20	"	"	2	m	1	...	2	2	2	12	8	53 00	636 00	c	m	225	"	"	20 00 "
"	259 27	27	"	"	6	m	1	...	2	6	6	12	8	53 00	636 00	c	m	250	"	"	20 00 "
"	260 20	20	"	"	2	s	...	...	...	2	2	12	8	53 00	636 00	c	m	250	"	"	not answ'd
"	261 26	26	"	"	6	m	...	...	1	6	6	12	8	53 00	636 00	c	m	300	"	"	father
Laborer	262 17	17	U. S.	U. S.	...	s	...	...	...	3	3	12	10	39 00	468 00	c	m	*	"	...	...
"	263 19	19	"	"	...	s	...	...	...	5	5	12	10	39 00	468 00	c	m	*	"	...	...
"	264 50	50	Poland	Poland	...	m	7	4	6	19	19	12	10	59 00	708 00	c	m	250	"	...	...
"	265 18	18	Poland	Poland	10	s	...	...	...	3	3	12	10	25 00	300 00	c	m	...	less	farmer	25 00 per yr
"	266 56	56	Finland	Finland	15	m	3	1	3	14	14	10	10	39 00	390 00	c	m	100	same	carpenter	10 40 per mo
"	267 26	26	"	"	1	m	...	...	1	1	1	12	10	47 00	564 00	c	m	150	...	...	...

	206 12	Canada	207 13	France	208 14	Canada	209 15	France	210 16	Canada	211 17	France	212 18	Canada	213 19	France	214 20	Canada	215 21	France	216 22	Canada	217 23	France	218 24	Canada	219 25	France	220 26	Canada	221 27	France	222 28	Canada	223 29	France	224 30	Canada	225 31	France	226 32	Canada	227 33	France	228 34	Canada	229 35	France	230 36	Canada	231 37	France	232 38	Canada	233 39	France	234 40	Canada	235 41	France	236 42	Canada	237 43	France	238 44	Canada	239 45	France	240 46	Canada	241 47	France	242 48	Canada	243 49	France	244 50	Canada	245 51	France	246 52	Canada	247 53	France	248 54	Canada	249 55	France	250 56	Canada	251 57	France	252 58	Canada	253 59	France	254 60	Canada	255 61	France	256 62	Canada	257 63	France	258 64	Canada	259 65	France	260 66	Canada	261 67	France	262 68	Canada	263 69	France	264 70	Canada	265 71	France	266 72	Canada	267 73	France	268 74	Canada	269 75	France	270 76	Canada	271 77	France	272 78	Canada	273 79	France	274 80	Canada	275 81	France	276 82	Canada	277 83	France	278 84	Canada	279 85	France	280 86	Canada	281 87	France	282 88	Canada	283 89	France	284 90	Canada	285 91	France	286 92	Canada	287 93	France	288 94	Canada	289 95	France	290 96	Canada	291 97	France	292 98	Canada	293 99	France	294 100	Canada	295 101	France	296 102	Canada	297 103	France	298 104	Canada	299 105	France	300 106	Canada	301 107	France	302 108	Canada	303 109	France	304 110	Canada	305 111	France	306 112	Canada	307 113	France	308 114	Canada	309 115	France	310 116	Canada	311 117	France	312 118	Canada	313 119	France	314 120	Canada	315 121	France	316 122	Canada	317 123	France	318 124	Canada	319 125	France	320 126	Canada	321 127	France	322 128	Canada	323 129	France	324 130	Canada	325 131	France	326 132	Canada	327 133	France	328 134	Canada	329 135	France	330 136	Canada	331 137	France	332 138	Canada	333 139	France	334 140	Canada	335 141	France	336 142	Canada	337 143	France	338 144	Canada	339 145	France	340 146	Canada	341 147	France	342 148	Canada	343 149	France	344 150	Canada	345 151	France	346 152	Canada	347 153	France	348 154	Canada	349 155	France	350 156	Canada	351 157	France	352 158	Canada	353 159	France	354 160	Canada	355 161	France	356 162	Canada	357 163	France	358 164	Canada	359 165	France	360 166	Canada	361 167	France	362 168	Canada	363 169	France	364 170	Canada	365 171	France	366 172	Canada	367 173	France	368 174	Canada	369 175	France	370 176	Canada	371 177	France	372 178	Canada	373 179	France	374 180	Canada	375 181	France	376 182	Canada	377 183	France	378 184	Canada	379 185	France	380 186	Canada	381 187	France	382 188	Canada	383 189	France	384 190	Canada	385 191	France	386 192	Canada	387 193	France	388 194	Canada	389 195	France	390 196	Canada	391 197	France	392 198	Canada	393 199	France	394 200	Canada	395 201	France	396 202	Canada	397 203	France	398 204	Canada	399 205	France	400 206	Canada	401 207	France	402 208	Canada	403 209	France	404 210	Canada	405 211	France	406 212	Canada	407 213	France	408 214	Canada	409 215	France	410 216	Canada	411 217	France	412 218	Canada	413 219	France	414 220	Canada	415 221	France	416 222	Canada	417 223	France	418 224	Canada	419 225	France	420 226	Canada	421 227	France	422 228	Canada	423 229	France	424 230	Canada	425 231	France	426 232	Canada	427 233	France	428 234	Canada	429 235	France	430 236	Canada	431 237	France	432 238	Canada	433 239	France	434 240	Canada	435 241	France	436 242	Canada	437 243	France	438 244	Canada	439 245	France	440 246	Canada	441 247	France	442 248	Canada	443 249	France	444 250	Canada	445 251	France	446 252	Canada	447 253	France	448 254	Canada	449 255	France	450 256	Canada	451 257	France	452 258	Canada	453 259	France	454 260	Canada	455 261	France	456 262	Canada	457 263	France	458 264	Canada	459 265	France	460 266	Canada	461 267	France	462 268	Canada	463 269	France	464 270	Canada	465 271	France	466 272	Canada	467 273	France	468 274	Canada	469 275	France	470 276	Canada	471 277	France	472 278	Canada	473 279	France	474 280	Canada	475 281	France	476 282	Canada	477 283	France	478 284	Canada	479 285	France	480 286	Canada	481 287	France	482 288	Canada	483 289	France	484 290	Canada	485 291	France	486 292	Canada	487 293	France	488 294	Canada	489 295	France	490 296	Canada	491 297	France	492 298	Canada	493 299	France	494 300	Canada	495 301	France	496 302	Canada	497 303	France	498 304	Canada	499 305	France	500 306	Canada	501 307	France	502 308	Canada	503 309	France	504 310	Canada	505 311	France	506 312	Canada	507 313	France	508 314	Canada	509 315	France	510 316	Canada	511 317	France	512 318	Canada	513 319	France	514 320	Canada	515 321	France	516 322	Canada	517 323	France	518 324	Canada	519 325	France	520 326	Canada	521 327	France	522 328	Canada	523 329	France	524 330	Canada	525 331	France	526 332	Canada	527 333	France	528 334	Canada	529 335	France	530 336	Canada	531 337	France	532 338	Canada	533 339	France	534 340	Canada	535 341	France	536 342	Canada	537 343	France	538 344	Canada	539 345	France	540 346	Canada	541 347	France	542 348	Canada	543 349	France	544 350	Canada	545 351	France	546 352	Canada	547 353	France	548 354	Canada	549 355	France	550 356	Canada	551 357	France	552 358	Canada	553 359	France	554 360	Canada	555 361	France	556 362	Canada	557 363	France	558 364	Canada	559 365	France	560 366	Canada	561 367	France	562 368	Canada	563 369	France	564 370	Canada	565 371	France	566 372	Canada	567 373	France	568 374	Canada	569 375	France	570 376	Canada	571 377	France	572 378	Canada	573 379	France	574 380	Canada	575 381	France	576 382	Canada	577 383	France	578 384	Canada	579 385	France	580 386	Canada	581 387	France	582 388	Canada	583 389	France	584 390	Canada	585 391	France	586 392	Canada	587 393	France	588 394	Canada	589 395	France	590 396	Canada	591 397	France	592 398	Canada	593 399	France	594 400	Canada	595 401	France	596 402	Canada	597 403	France	598 404	Canada	599 405	France	600 406	Canada	601 407	France	602 408	Canada	603 409	France	604 410	Canada	605 411	France	606 412	Canada	607 413	France	608 414	Canada	609 415	France	610 416	Canada	611 417	France	612 418	Canada	613 419	France	614 420	Canada	615 421	France	616 422	Canada	617 423	France	618 424	Canada	619 425	France	620 426	Canada	621 427	France	622 428	Canada	623 429	France	624 430	Canada	625 431	France	626 432	Canada	627 433	France	628 434	Canada	629 435	France	630 436	Canada	631 437	France	632 438	Canada	633 439	France	634 440	Canada	635 441	France	636 442	Canada	637 443	France	638 444	Canada	639 445	France	640 446	Canada	641 447	France	642 448	Canada	643 449	France	644 450	Canada	645 451	France	646 452	Canada	647 453	France	648 454	Canada	649 455	France	650 456	Canada	651 457	France	652 458	Canada	653 459	France	654 460	Canada	655 461	France	656 462	Canada	657 463	France	658 464	Canada	659 465	France	660 466	Canada	661 467	France	662 468	Canada	663 469	France	664 470	Canada	665 471	France	666 472	Canada	667 473	France	668 474	Canada	669 475	France	670 476	Canada	671 477	France	672 478	Canada	673 479	France	674 480	Canada	675 481	France	676 482	Canada	677 483	France	678 484	Canada	679 485	France	680 486	Canada	681 487	France	682 488	Canada	683 489	France	684 490	Canada	685 491	France	686 492	Canada	687 493	France	688 494	Canada	689 495	France	690 496	Canada	691 497	France	692 498	Canada	693 499	France	694 500	Canada	695 501	France	696 502	Canada	697 503	France	698 504	Canada	699 505	France	700 506	Canada	701 507	France	702 508	Canada	703 509	France	704 510	Canada	705 511	France	706 512	Canada	707 513	France	708 514	Canada	709 515	France	710 516	Canada	711 517	France	712 518	Canada	713 519	France	714 520	Canada	715 521	France	716 522	Canada	717 523	France	718 524	Canada	719 525	France	720 526	Canada	721 527	France	722 528	Canada	723 529	France	724 530	Canada	725 531	France	726 532	Canada	727 533	France	728 534	Canada	729 535	France	730 536	Canada	731 537	France	732 538	Canada	733 539	France	734 540	Canada	735 541	France	736 542	Canada	737 543	France	738 544	Canada	739 545	France	740 546	Canada	741 547	France	742 548	Canada	743 549	France	744 550	Canada	745 551	France	746 552	Canada	747 553	France	748 554	Canada	749 555	France	750 556	Canada	751 557	France	752 558	Canada	753 559	France	754 560	Canada	755 561	France	756 562	Canada	757 563	France	758 564	Canada	759 565	France	760 566	Canada	761 567	France	762 568	Canada	763 569	France	764 570	Canada	765 571	France	766 572	Canada	767 573	France	768 574	Canada	769 575	France	770 576	Canada	771 577	France	772 578	Canada	773 579	France	774 580	Canada	775 581	France	776 582	Canada	777 583	France	778 584	Canada	779 585	France	780 586	Canada	781 587	France	782 588	Canada	783 589	France	784 590	Canada	785 591	France	786 592	Canada	787 593	France	788 594	Canada	789 595	France	790 596	Canada	791 597	France	792 598	Canada	793 599	France	794 600	Canada	795 601	France	796 602	Canada	797 603	France	798 604	Canada	799 605	France	800 606	Canada	801 607	France	802 608	Canada	803 609	France	804 610	Canada	805 611	France	806 612	Canada	807 613	France	808 614	Canada	809 615	France	810 616	Canada	811 617	France	812 618	Canada	813 619	France	814 620	Canada	815 621	France	816 622	Canada	817 623	France	818 624	Canada	819 625	France	820 626	Canada	821 627	France	822 628	Canada	823 629	France	824 630	Canada	825 631	France	826 632	Canada	827 633	France	828 634	Canada	829 635	France	830 636	Canada	831 637	France	832 638	Canada	833 639	France	834 640	Canada	835 641	France	836 642	Canada	837 643	France	838 644	Canada	839 645	France	840 646	Canada	841 647	France	842 648	Canada	843 649	France	844 650	Canada	845 651	France	846 652	Canada	847 653	France	848 654	Canada	849 655	France	850 656	Canada	851 657	France	852 658	Canada	853 659	France	854 660	Canada	855 661	France	856 662	Canada	857 663	France	858 664	Canada	859 665	France	860 666	Canada	861 667	France	862 668	Canada	863 669	France	864 670	Canada	865 671	France	866 672	Canada	867 673	France	868 674	Canada	869 675	France	870 676	Canada	871 677	France	872 678	Canada	873 679	France	874 680	Canada	875 681	France	876 682	Canada	877 683	France	878 684	Canada	879 685	France	880 686	Canada	881 687	France	882 688	Canada	883 689	France	884 690	Canada	885 691	France	886 692	Canada	887 693	France	888 694	Canada	889 695	France	890 696	Canada	891 697	France	892 698	Canada
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LABOR AND INDUSTRIAL STATISTICS.

TABLE NO. 7.—Continued.

Occupation.	Line number.	How many hours for a day's work in the old country.	Amount of money at interest or in the bank.	If foreign born, how much money did you have on arrival in U. S.	Do you own your home, if so, its value.	If mortgaged, amount of mortgage.	Rate of interest.	Are you as well off as five years ago.	Loss of time.			If renting home, monthly rental.	If boarding, cost per week, including room.	Life insurance, how much.	Do you belong to a benevolent society.	Weekly benefit in case of sickness or accident.	Have you a sewing machine.	Have you a piano.	Have you an organ.	Do you take a newspaper.			Age began work.	State of health then.	State of health now.	Amount of relief rendered friends in the old country.	Amount of money furnished to friends for passage to U. S.
									From sickness.—	(Days.)	Inability to obtain work.—(Days.)	Causes not stated.—(Days.)								Daily.	Weekly.	Monthly.					
Drill boy	235	...	...	...	no	...	...	yes	...	...	...	\$4 00	...	...	yes	\$6 00	no	no	no	no	yes	no	12	good	good	...	...
"	236	...	...	...	"	...	...	"	...	...	...	...	...	...	"	6 00	"	"	"	"	no	"	15	"	"	...	...
"	237	...	...	...	"	...	...	"	...	...	...	...	...	...	"	6 00	"	"	"	"	no	"	15	"	"	...	...
"	238	...	...	...	"	...	...	"	...	...	...	...	...	...	"	6 00	"	"	"	"	"	"	16	"	"	...	...
"	239	...	...	...	"	...	...	"	...	...	...	...	...	...	"	6 00	"	"	"	"	"	"	14	"	"	...	...
"	240	...	...	...	"	...	...	"	...	...	...	...	...	...	"	6 00	"	"	"	"	"	"	13	"	"	...	...
Blacksmith	241	...	...	...	"	...	...	yes	...	...	...	5 00	...	1,000	"	6 00	"	"	"	"	"	"	15	"	"	...	...
Painter	242	...	...	\$15 00	\$800	...	...	"	...	...	...	...	...	1,000	"	6 00	yes	"	yes	yes	no	"	16	"	"	...	...
Brakeman	243	...	...	...	no	...	...	"	...	...	...	4 00	...	...	"	6 00	"	"	"	"	"	"	17	"	"	...	...
"	244	...	...	...	no	...	...	"	...	...	...	...	...	...	"	6 00	"	"	"	"	"	"	14	"	"	...	...
Mining Capt.	245	...	...	75 00	"	...	...	"	...	...	...	...	\$7 50	...	"	6 00	no	"	no	"	"	"	17	"	"	...	...
Car filler	246	...	...	8 00	"	...	...	"	...	...	...	4 00	...	...	"	6 00	yes	"	"	"	"	"	14	"	"	...	...
Machinist	247	...	...	40 00	"	...	...	"	...	...	...	...	...	...	"	6 00	"	"	"	"	"	"	16	"	"	...	...
Carpenter	248	...	...	27 00	"	...	...	"	...	...	...	3 00	...	...	"	6 00	"	"	"	"	"	"	13	"	"	...	...
Pump engineer	249	...	...	...	"	...	...	"	...	...	...	...	...	...	"	6 00	no	"	"	"	"	"	15	"	"	...	...
Trammer	250	...	100	25 00	"	...	...	yes	...	...	...	...	4 00	...	"	6 00	yes	"	"	"	"	"	9	"	"	\$25	...
"	251	...	...	...	"	...	...	"	...	...	...	8 00	...	...	"	6 00	no	"	"	"	"	"	12	"	"	125	...
"	252	...	...	...	"	...	...	"	...	...	...	...	...	...	"	6 00	"	"	"	"	"	"	14	"	"	...	...
"	253	...	...	...	"	...	...	"	...	...	...	...	...	...	"	6 00	yes	"	"	"	yes	"	13	"	"	...	...
"	254	...	...	...	"	...	...	"	...	...	...	...	...	1,000	"	6 00	"	"	"	"	no	"	12	"	"	...	\$120
"	255	...	...	...	"	...	...	"	...	...	...	...	4 00	...	"	6 00	no	"	"	"	"	"	14	"	"	...	...
"	256	...	...	...	"	...	...	yes	...	...	...	...	4 00	...	"	6 00	"	"	"	"	"	"	10	"	"	150	...
"	257	...	...	24	"	...	...	"	...	...	...	...	4 00	...	"	6 00	"	"	"	"	"	"	9	"	"	75	...
"	258	...	...	...	"	...	...	"	...	...	...	...	4 00	...	"	6 00	"	"	"	"	"	"	10	"	"	...	...
"	259	...	...	16 50	"	...	...	"	...	...	...	...	...	...	"	6 00	"	"	"	"	"	"	7	"	"	...	...
"	260	...	...	...	"	...	...	"	...	...	...	...	4 00	...	"	6 00	"	"	"	"	"	"	9	"	"	100	...
"	261	...	...	...	"	...	...	yes	...	...	...	...	...	...	"	6 00	"	"	"	"	"	"	13	"	"	...	...
Laborer	262	...	...	...	"	...	...	"	...	...	...	...	...	...	"	6 00	"	"	"	"	"	"	14	"	"	...	...
"	263	...	...	...	"	...	...	yes	...	...	...	...	...	...	"	6 00	"	"	"	"	"	"	14	"	"	...	...
"	264	...	...	...	"	...	...	"	...	...	...	...	...	1,000	"	6 00	yes	"	"	"	"	"	15	"	"	...	...
"	265	...	...	...	"	...	...	yes	...	...	...	...	4 50	...	"	6 00	no	"	"	"	"	"	16	"	"	...	...
"	266	...	...	...	"	...	...	yes	...	...	...	...	...	...	"	6 00	yes	"	"	"	"	"	10	"	"	...	...
"	267	...	...	...	"	...	...	"	...	...	...	...	...	...	"	6 00	no	"	"	"	"	"	13	"	"	100	...

TABLE NO. 7.—Continued.

Occupation.	Line number.	Age.	Nativity.	Nativity of parents.	How long in U. S., if foreign born.—(Years.)	Married or single.	How many children in family.	How many attend school.	How many depend on you for support.	How many years at present occupation.	How long with present employer.—(Years.)	Number of months employed during year.	How many hours for a day's work.	Wages paid.	Annual earnings.	Are you paid cash or trade.	How often are you paid.	Amount saved during the year.	How do wages compare with former years in this country.	What occupation did you follow in the old country.	Wages received in the old country.
Laborer.....	313	28	U. S.	England	40	s	6	3	7	5	5 yrs	12	10	\$40 00 pr m	\$480 00	c	m	\$100	same		
Mining capt.	314	45	Ireland	Ireland	40	m	6	3	7	16	16 "	12	10	100 00 "	7,200 00	c	m	225	higher		
Miner.....	315	28	U. S.	England	8	s				12	12 "	12	10	48 00 "	576 00	c	m	195	same	miner	\$15 00 per mo
"	316	30	England	England	1	s				15	1 mo	12	10	48 00 "	576 00	c	m	200	"	"	16 00 "
"	317	31			1	s				6	1 yr	12	10	48 00 "	576 00	c	m		"	"	15 00 "
"	318	36	"	"	17	m	3		4	20	1 mo	12	10	48 00 "	576 00	c	m		"	"	15 00 "
"	319	30	"	"	20	m	2		8	10	10 yrs	12	10	50 00 "	600 00	c	m		"	"	15 00 per mo
"	320	33	"	"	1	m	6	2	5	1	1 "	10	10	50 00 "	600 00	c	m		"	miner	40 00 per year
"	321	24	Austria	Austria	5	m	1		2	2	5 "	12	8	53 00 "	636 00	c	m	300	"	farming laborer	28 00 per mo
"	322	24	Canada	Canada	14	m	1		2	14	14 "	12	10	48 00 "	576 00	c	m	200	"	"	
"	323	30	Finland	Finland	8	s				4	4 "	12	10	48 00 "	576 00	c	m		"	farmer	not ans'w'd
"	324	40	"	"	8	s				4	4 "	12	10	48 00 "	576 00	c	m		"	laborer	16 00 per mo
"	325	34	"	"	15	s	6	3	6	15	2 "	12	10	48 00 "	576 00	c	m	125	"	farmer	30 00 per year
"	326	26	"	"	2	s				2	2 "	12	10	48 00 "	576 00	c	m	150	"	"	30 00 "
"	327	30	"	"	5	s				5	5 "	12	10	48 00 "	576 00	c	m	150	"	"	30 00 "
"	328	28	"	"	9	m	2		3	5	5 "	12	10	48 00 "	576 00	c	m	125	"	"	30 00 "
Blacksmith.....	329	36	England	England	15	s			1	25	15 "	12	10	65 00 "	780 00	c	m	300	"	blacksmith	12 00 per mo
"	330	33	"	"	25	m	1	1	2	40	23 "	12	10	65 00 "	780 00	c	m	200	"	"	25 00 "
"	331	40	"	"	6	m	1		1	2	5 "	12	12	45 00 "	540 00	c	m	150	"	miner	15 00 "
Trammer.....	332	33	Italy	Italy	4	m				4	4 "	12	10	53 00 "	636 00	c	m	200	"	farmer	40 00 per year
"	333	23	Austria	Austria	3	s				3	3 "	12	8	53 00 "	636 00	c	m	250	"	"	40 00 "
"	334	14	"	"	3	m				4	4 "	12	8	53 00 "	636 00	c	m		same	"	40 00 "
"	335	25	"	"	6	m	1		2	6	6 "	12	8	53 00 "	636 00	c	m	225	"	"	40 00 "
"	336	26	"	"	3	s				8	8 "	12	10	53 00 "	636 00	c	m	225	"	"	40 00 "
"	337	30	"	"	10	s				8	8 "	12	10	53 00 "	636 00	c	m	200	"	"	40 00 "
"	338	40	"	"	1	m				1	1 "	12	10	53 00 "	636 00	c	m	200	"	farmer	40 00 per year
Fireman.....	339	35	Italy	Italy	13	m	5	3	6	1	12 "	12	10	56 00 "	672 00	c	m	125	"	"	40 00 "
"	340	46	Canada	Canada	14	m	5		4	1	14 "	12	10	56 00 "	672 00	c	m		higher	laborer	28 00 per mo
Timberman.....	341	25	Finland	Finland		m	1		2	1	1 "	12	10	48 00 "	576 00	c	m		same	farmer	30 00 per year
Drill boy.....	342	20	"	Norway		s				2	2 "	12	10	32 00 "	384 00	c	m		"	not ans'w'd	not ans'd
Mason.....	343	46	Germany	Germany	9	m	5	2	5	9	9 "	12	10	60 00 "	720 00	c	m	150	"	mason	20 00 per mo
Tinsmith.....	344	23	U. S.	"		m	2		3	20	10 "	12	10	65 00 "	780 00	c	m	175	"	not ans'w'd	not ans'd
Lander.....	345	36	Ireland	Ireland		m	5	2	6	11	21 "	11	12	60 00 "	720 00	c	m		"	farmer	30 00 per year

Carpenter.....	Norway.....	8	m	1	8	2	30	8	"	13	10	53	00	654	00	c	m	300	"	not ans'd	carpenter	12 50 per mo
Machinist.....	Canada.....	1	m	9	8	7	34	1	"	11 1/2	10	48	00	503	00	c	m	---	same	"	clerk	15 00 "
Helper.....	England.....	1	s	---	---	---	---	---	"	12	10	40	00	490	00	c	m	---	not ans'd	less	---	---
Barn boss.....	".....	1	s	---	---	---	---	---	1 mo	5	10	40	00	300	00	c	m	---	less	less	---	---
Teamster.....	".....	1	s	---	---	---	---	---	"	5	10	47	00	235	00	c	m	---	less	less	---	---
Carpenter.....	".....	27	m	4	---	5	25	3	yr8	13	10	55	00	780	00	c	m	300	higher	not ans'd	wood chop'r	25 00 per mo
Watchman.....	Finland.....	7	m	4	---	6	2	2	"	9	12	50	00	450	00	c	m	---	not ans'd	same	musician	30 00 "
Painter.....	".....	2	s	---	---	---	---	---	"	11 1/2	10	50	00	608	75	c	m	300	"	"	farmer	not ans'd
Timberman helper.....	".....	1	m	---	---	---	---	---	"	13	10	48	00	576	00	c	m	---	"	"	dyer	25 00 per mo
".....	".....	2	s	---	---	---	---	---	"	13	10	48	00	576	00	c	m	---	"	"	farmer	40 00 per year
Lander.....	Italy.....	3	s	---	---	---	---	---	"	12	8	54	00	648	00	c	m	235	higher	"	"	40 00 "
".....	".....	14	m	4	3	5	2	2	"	12	10	54	00	648	00	c	m	300	"	"	fisherman	not ans'd
Mine laborer.....	Norway.....	1	s	---	---	---	---	---	"	12	10	48	00	576	00	c	m	300	same	"	miner	15 00 per mo
".....	England.....	11	m	3	---	4	11	11	"	12	10	48	00	576	00	c	m	125	"	"	farmer	self
".....	Canada.....	1	m	3	---	4	1	1	"	12	10	48	00	576	00	c	m	150	"	"	"	100 00 per year
Laborer.....	Finland.....	3	m	---	---	---	---	---	3 mo	2	10	40	00	80	00	c	m	---	same	"	"	100 00 "
".....	".....	1	s	---	---	---	---	---	1 yr	13	10	40	00	480	00	c	m	---	"	"	"	not ans'd
".....	".....	3	s	---	---	---	---	---	"	12	10	48	00	576	00	c	m	---	"	"	"	not ans'd
".....	".....	15	s	---	---	---	---	---	"	5 1/2	10	39	00	214	00	c	m	100	"	"	"	not ans'd
".....	".....	15	s	---	---	---	---	---	"	13	10	39	00	214	00	c	m	---	"	"	"	not ans'd
".....	Italy.....	16	m	5	3	4	1	16	"	12	10	40	00	480	00	c	m	350	less	"	farmer	40 00 per year
".....	Norway.....	8	m	1	---	2	3	8	"	12	10	54	00	648	00	c	m	230	same	"	miner	30 00 per mo
".....	".....	16	m	3	---	4	1	16	"	12	10	40	00	480	00	c	m	---	less	"	laborer	40 00 per year
Timberman helper.....	Finland.....	1	m	4	3	5	1	1	mo	12	10	48	00	576	00	c	m	---	same	"	farmer	100 00 "
".....	".....	2	s	---	---	---	---	---	1 yr	12	10	48	00	576	00	c	m	---	"	"	"	100 00 "
".....	".....	1	s	---	---	---	---	---	"	12 1/2	10	48	00	576	00	c	m	---	same	"	"	40 00 "
".....	".....	1	s	---	---	---	---	---	1 yr	12	10	48	00	576	00	c	m	---	higher	"	"	40 00 "
Miner.....	England.....	16	s	---	---	---	---	---	"	13	10	48	00	576	00	c	m	---	"	"	"	not ans'd
".....	".....	16	m	6	5	5	16	6	"	12	10	53	00	696	00	c	m	400	"	"	sailor	not ans'd
".....	".....	18	m	6	4	5	22	8	"	12	10	47	00	594	00	c	m	100	same	"	miner	15 00 per mo
".....	".....	2	s	---	---	---	---	---	"	12	10	48	00	576	00	c	m	176	not ans'd	"	"	15 00 "
".....	".....	4	m	2	---	3	25	1	"	12	10	55	00	600	00	c	m	200	same	"	"	15 00 "
".....	".....	3	s	---	---	---	---	---	"	6	10	48	00	398	00	c	m	---	not ans'd	"	"	not ans'd
".....	".....	15	m	3	---	4	12	14	"	13	10	55	00	600	00	c	m	400	"	"	not ans'd	fisherman
".....	Finland.....	16	m	1	---	2	1	9	"	12	10	56	00	600	00	c	m	300	same	"	farmer	100 00 per year
".....	".....	8	m	3	---	4	16	8	"	12	10	50	00	600	00	c	m	126	"	"	teacher	50 00 per mo
".....	".....	6	m	3	---	4	1	5	"	12	10	50	00	600	00	c	m	---	"	"	farmer	100 00 per year
".....	".....	20	m	3	---	4	10	14	"	12	10	55	00	600	00	c	m	---	"	"	"	100 00 per year
".....	".....	6	s	---	---	---	---	---	"	11	10	48	00	528	00	c	m	---	less	"	laborer	40 00 "
".....	".....	2	s	---	---	---	---	---	3 mo	12	10	50	00	720	00	c	m	---	same	"	farmer	100 00 "
".....	Scotland.....	6	s	---	---	---	---	---	1 yr	13	10	48	00	576	00	c	m	200	higher	"	"	12 00 per mo
".....	Norway.....	3	m	1	---	2	2	3	"	13	10	45	00	540	00	c	m	200	same	"	fishling	40 00 per year
Tramman.....	Finland.....	1	s	---	---	---	---	---	4 mo	4	8	53	00	212	00	c	m	---	"	"	laborer	40 00 per year

* Father takes his wages.

TABLE No. 7.—Continued.

Occupation.	Line number.	How many hours for a day's work in the old country.	Amount of money at interest or in the bank.	If foreign born, how much money did you have on arrival in U. S.	Do you own your home. If so, its value.	If mortgaged, amount of mortgage.	Rate of interest.	Are you as well off as five years ago.	Loss of time.			If renting home, monthly rental.	If boarding, cost per week, including room.	Life insurance, how much.	Do you belong to a benevolent society.	Weekly benefit in case of sickness or accident.	Have you a sewing machine.	Have you a piano.	Have you an organ.	Do you take a newspaper.			Age began work.	State of health then.	State of health now.	Amount of relief rendered friends in the old country.	Amount of money furnished to friends for passage to U. S.
									From sickness.—(Days.)	Inability to obtain work.—(Days.)	Causes not stated.—(Days.)									Daily.	Weekly.	Monthly.					
Laborer.....	313	.....	.....	.....	no	.....	.....	yes	.....	.....	.....	\$4 50	.....	.....	yes	\$6 00	no	no	no	no	no	12	good	.....	.....
Miner.....	314	.....	.....	.....	\$1,000	.....	.....	.....	.....	.....	.....	4 00	.....	.....	.....	6 00	yes	no	no	no	no	14	.....	.....	.....	.....
Miner.....	315	.....	.....	.....	no	.....	.....	.....	.....	.....	.....	5 00	.....	.....	.....	6 00	no	no	no	no	no	15	.....	.....	.....	.....
".....	316	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4 50	.....	.....	.....	6 00	.....	.....	.....	.....	.....	15	.....	.....	.....	.....
".....	317	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6 00	.....	.....	.....	.....	.....	16	.....	.....	.....	.....
".....	318	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6 00	yes	.....	.....	.....	.....	16	.....	.....	.....	.....
".....	319	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6 00	no	.....	.....	.....	.....	20	.....	.....	.....	.....
".....	320	.....	.....	.....	600	.....	.....	.....	.....	.....	.....	4 00	.....	.....	.....	6 00	yes	.....	.....	.....	.....	10	.....	.....	\$1,200	.....
".....	321	.....	.....	.....	600	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6 00	.....	.....	.....	.....	.....	12	.....	.....	.....	.....
".....	322	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
".....	323	.....	.....	.....	no	.....	.....	.....	.....	.....	.....	4 00	.....	.....	.....	6 00	no	.....	.....	.....	.....	.....	.....	.....	.....	.....
".....	324	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4 00	.....	.....	.....	6 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
".....	325	.....	.....	.....	650	.....	.....	.....	.....	.....	.....	.....	.....	\$1,000	.....	6 00	yes	.....	.....	.....	.....	12	.....	.....	.....	.....
".....	326	.....	.....	.....	no	.....	.....	.....	.....	.....	.....	4 50	.....	.....	.....	6 00	no	.....	.....	.....	.....	11	.....	.....	.....	.....
".....	327	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4 50	.....	.....	.....	6 00	.....	.....	.....	.....	.....	11	.....	.....	.....	.....
".....	328	.....	.....	.....	570	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6 00	yes	.....	.....	yes	.....	19	.....	.....	100	.....
Blacksmith.....	329	.....	.....	.....	4,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6 00	no	.....	.....	no	.....	11	.....	.....	.....	.....
".....	330	.....	.....	.....	8,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6 00	yes	.....	.....	.....	.....	14	.....	.....	.....	.....
".....	331	.....	.....	.....	no	.....	.....	.....	.....	.....	.....	4 00	.....	.....	.....	6 00	no	.....	.....	yes	no	12	.....	.....	.....	.....
Trammer.....	332	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4 00	.....	.....	.....	6 00	.....	.....	.....	.....	.....	10	.....	.....	.....	.....
".....	333	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4 00	.....	.....	.....	6 00	.....	.....	.....	.....	.....	12	.....	.....	.....	.....
".....	334	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4 00	.....	.....	.....	6 00	yes	.....	.....	.....	.....	2	.....	.....	50	.....
".....	335	.....	.....	.....	600	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6 00	yes	.....	.....	.....	.....	10	.....	.....	.....	.....
".....	336	.....	.....	.....	no	.....	.....	.....	.....	.....	.....	4 00	.....	.....	.....	6 00	no	.....	.....	.....	.....	12	.....	.....	.....	.....
".....	337	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4 00	.....	.....	.....	6 00	.....	.....	.....	.....	.....	20	.....	.....	200	.....
".....	338	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6 00	.....	.....	.....	.....	.....	12	.....	.....	.....	.....
Fireman.....	339	.....	.....	.....	900	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6 00	yes	.....	.....	.....	.....	10	.....	.....	.....	.....
".....	340	.....	.....	.....	500	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6 00	.....	.....	.....	yes	.....	14	.....	.....	.....	.....
Timberman.....	341	.....	.....	.....	no	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6 00	.....	.....	.....	.....	.....	8	.....	.....	.....	.....
Drill boy.....	342	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6 00	.....	.....	no	.....	.....	12	.....	.....	.....	.....
Mason.....	343	700	yes	6 00	no	yes	yes	15	
Timberman.....	344	500	6 00	yes	no	no	yes	18	
Lander.....	345	700	1,000	6 00	no	no	no	9	

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[illegible]

↑ Refused.

TABLE No. 7.—Continued.

Occupation.	Line number.		Age.	Nativity.	Nativity of parents.	How long in U. S., if foreign born.—(Years.)	Married or single.	How many children in family.	How many attend school.	How many depend on you for support.	How many years at present occupation.	How long with present employer.—(Years.)	Number of months employed during year.	How many hours for a day's work.	Wages paid.	Annual earnings.	Are you paid cash or trade.	How often are you paid.	Amount saved during the year.	How do wages compare with former years in this country.	What occupation did you follow in the old country.	Wages received in the old country.
Trammer	391	22	391	Finland	Finland	1	m	1	1	2	2	2 mo	12	8	\$53 00	\$638 00	c	m	...	same	laborer shoemaker	\$40 00 per year
	392	27	392	"	"	1	m	1	1	1	1	2 yrs	12	8	53 00	636 00	c	m	...	"	fisher	not answered
	393	27	393	"	"	1	s	1	1	1	2	1 yr	12	10	53 00	636 00	c	m	200	"	laborer	\$40 00 per year
	394	22	394	Italy	Italy	2	s	1	1	1	2	2 yrs	12	8	53 00	636 00	c	m	250	not answe'd	farmer	40 00
	395	22	395	"	"	2	s	1	1	1	2	2	12	8	53 00	636 00	c	m	...	"	"	"
" boss	396	27	396	"	"	7	s	1	1	1	7	5	12	8	53 00	636 00	c	m	175	"	"	"
	397	24	397	"	"	8	s	1	1	1	3	3	12	8	65 00	730 00	c	m	800	higher	"	"
	398	25	398	Poland	Poland	4	s	1	1	1	4	3	5	10	50 00	250 00	c	m	90	less	laborer	8 00 per mo
	399	28	399	"	"	7	m	1	1	2	7	4	7 1/2	10	56 00	420 00	c	m	120	same	"	"
	400	28	400	"	"	6	m	4	1	6	6	5	11	10	54 00	594 00	c	m	60	less	brewer	22 10
"	401	37	401	"	"	4	m	3	1	4	3 1/2	8	10 1/2	8	52 00	559 00	c	m	90	same	laborer	15 60
	402	45	402	"	"	9	m	8	2	4	8	8	10 1/2	8	52 00	559 00	c	m	90	less	teamster	19 50
	403	32	403	"	"	5	m	3	1	4	5 1/2	4 1/2	10 1/2	8	52 00	533 00	c	m	...	"	laborer	19 50
	404	31	404	"	"	1	m	3	1	4	3	8	10 1/2	8	50 00	526 00	c	m	50	"	"	"
	405	22	405	"	"	1	s	1	1	1	1 1/2	1 1/2	11	10	45 00	495 00	c	m	80	not answe'd	"	19 50
"	406	26	406	"	"	2	m	6	2	7	1	1 yr	11	10	48 00	528 00	c	m	...	not answe'd	"	"
	407	28	407	"	"	3	m	1	1	2	2	2 yrs	11 1/2	10	50 00	575 10	c	m	160	same	"	"
	408	28	408	"	"	4	s	1	1	1	2	2	9 1/2	10	48 00	444 00	c	m	110	"	carpenter	39 00
	409	24	409	"	"	4	s	1	1	1	3	3	11	10	48 00	528 00	c	m	120	"	laborer	18 20
	410	32	410	"	"	7	m	6	3	7	6	6	10 1/2	10	48 00	492 00	c	m	70	less	tanner	28 40
"	411	36	411	"	"	5	m	4	2	5	3	2	8 1/2	10	38 00	323 00	c	m	...	"	laborer	13 00
	412	32	412	"	"	8	m	4	2	6	5	5	11 1/2	10	48 00	552 00	c	m	120	"	"	5 00
	413	32	413	"	"	2	s	1	1	1	1	1 yr	11 1/2	10	48 00	552 00	c	m	140	not answe'd	"	15 60
	414	24	414	"	"	8	m	1	1	2	8	3 yrs	11 1/2	10	50 00	575 00	c	m	140	less	herder	7 80
	415	35	415	"	"	8	s	1	1	1	8	3	11 1/2	10	45 00	508 25	c	m	180	same	brewer	18 20
Laborer	416	41	416	"	"	12	m	4	2	5	13	13	8 1/2	10	40 00	350 00	c	m	60	smaller	carpenter	26 00
	417	40	417	"	"	16	m	9	4	9	13 1/2	16	9 1/2	10	54 00	513 00	c	m	...	less	gardener	6 00
	418	43	418	"	"	15	m	4	1	4	7	7	8	10	39 00	312 00	c	m	60	same	laborer	7 80
	419	34	419	"	"	6	m	4	1	5	1	1 yr	6 1/2	10	40 00	250 00	c	m	40	"	"	13 00
	420	39	420	"	"	2	m	3	1	4	2	2 yrs	9 1/2	10	50 00	475 00	c	m	70	not answe'd	"	"
"	421	36	421	"	"	12	m	4	1	6	4	2	11	10	40 00	340 00	c	m	60	less	min.w. m't'r	10 00
	422	27	422	"	"	8	m	2	1	3	2	2	11	10	39 00	439 00	c	m	96	same	laborer	13 00
	423	37	423	"	"	8	m	4	2	5	4	3	11	10	38 00	396 00	c	m	...	less	"	10 40

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"	424 22	"	---	"	---	9	s	m	---	---	---	---	---	1	4	4	4	11 1/2	10	29 00	"	438 75	o	m	90	"	same	laborer	10 40	---
"	425 33	"	---	"	---	8	m	m	---	---	---	---	---	4	3	3	3	11	10	30 00	"	439 00	o	m	80	"	less	butcher	28 40	---
Mine laborer	426 34	"	---	"	---	9	m	m	---	---	---	---	---	7	7	4	4	10 1/2	10	29 00	"	439 25	o	m	60	"	"	laborer	28 00	---
"	427 28	"	---	"	---	7	m	m	---	---	---	---	---	3	1	1	1	8	10	54 00	"	440 00	o	m	60	"	"	"	10 40	---
"	428 33	"	---	"	---	8	s	s	---	---	---	---	---	1	4	4	4	11 1/2	10	47 00	"	442 75	o	m	120	"	"	"	10 40	---
"	429 34	"	---	"	---	4	m	m	---	---	---	---	---	5	4	4	4	8 1/2	10	53 00	"	443 00	o	m	110	"	same	"	18 00	---
"	430 28	"	---	"	---	4	m	m	---	---	---	---	---	2	4	4	3	11 1/2	10	47 00	"	440 50	o	m	75	"	"	"	19 50	---
"	431 48	"	---	"	---	14	m	m	---	---	---	---	---	7	14	2	2	10	10	58 00	"	440 00	o	m	40	"	"	teaming laborer	12 00	---
Timberman	432 37	"	---	"	---	12	m	m	---	---	---	---	---	5	14	3	6	11	10	48 00	"	442 00	o	m	80	"	less	"	7 80	---
"	433 40	"	---	"	---	14	m	m	---	---	---	---	---	7	8	8	6	11 1/2	10	53 00	"	443 00	o	m	50	"	"	"	15 60	---
"	434 23	"	---	"	---	7	m	m	---	---	---	---	---	8	3	1	1	11 1/2	10	47 00	"	440 50	o	m	200	"	"	"	19 50	---
"	435 48	"	---	"	---	---	m	m	---	---	---	---	---	7	7	3	2	10	10	43 00	"	440 00	o	m	50	"	"	"	13 00	---
"	436 35	"	---	"	---	7	m	m	---	---	---	---	---	4	14	2	2	9	10	54 00	"	446 00	o	m	---	"	"	farmer herder laborer	18 00	---
Miner	437 28	"	---	"	---	6	m	m	---	---	---	---	---	3	8	8	3	10 1/2	10	53 00	"	446 00	o	m	---	"	"	"	10 40	---
"	438 40	"	---	"	---	10	m	m	---	---	---	---	---	7	4	4	8	10 1/2	10	60 00	"	443 00	o	m	200	"	same	"	10 40	---
"	439 27	"	---	"	---	16	s	s	---	---	---	---	---	---	4	3	3	11	10	42 00	"	442 00	o	m	120	"	less	"	18 20	---
Oiler	440 24	"	---	"	---	4	s	s	---	---	---	---	---	---	1	3	3	11 1/2	10	48 00	"	440 00	o	m	120	"	same	"	6 00	---
"	441 34	"	---	"	---	6	m	m	---	---	---	---	---	2	3	4	4	10 1/2	10	38 00	"	399 00	o	m	110	"	"	"	15 60	---
Dryman	442 56	"	---	"	---	16	m	m	---	---	---	---	---	2	16	10	9	11 1/2	10	50 00	"	502 50	o	m	180	"	"	"	26 00	---
Carpenter	443 33	"	---	"	---	8	m	m	---	---	---	---	---	3	8	8	9	12	10	35 00	"	815 00	o	m	---	"	"	carpenter	39 00	---
Tram layer	444 39	"	---	"	---	13	m	m	---	---	---	---	---	5	9	7	10	10 1/2	12	60 00	"	600 00	o	m	210	"	"	teamster laborer	15 60	---
"	445 38	"	---	"	---	9	m	m	---	---	---	---	---	3	6	5	10 1/2	10	52 00	"	559 60	o	m	160	"	"	"	10 40	---	
On rock breaker	446 34	"	---	"	---	2	m	m	---	---	---	---	---	4	2	2	11 1/2	10	39 00	"	438 75	o	m	60	"	"	"	20 80	---	
Crusher man	447 50	"	---	"	---	18	m	m	---	---	---	---	---	6	23	18	12	10	65 00	"	780 00	o	m	150	"	same	mason	30 00	---	
Railroader	448 45	"	---	"	---	21	m	m	---	---	---	---	---	8	2	20	12	10	54 00	"	648 00	o	m	125	"	"	musician	8 00	---	
Mason	449 29	"	---	"	---	9	m	m	---	---	---	---	---	1	9	9	12	10	50 00	"	600 00	o	m	250	"	"	tinsmith	20 00	---	
Lender	450 24	"	---	"	---	23	s	s	---	---	---	---	---	---	6	6	13	10	45 00	"	540 00	o	m	200	"	"	"	---	---	
Fireman	451 23	"	---	"	---	---	m	m	---	---	---	---	---	2	2	2	12	10	50 00	"	600 00	o	m	200	"	higher	"	---	---	
Wiper	452 37	"	---	"	---	---	m	m	---	---	---	---	---	4	1	8	12	10	63 00	"	780 00	o	m	300	"	"	"	---	---	
Brakeman	453 36	"	---	"	---	13	m	m	---	---	---	---	---	7	3	3	12	10	65 00	"	780 00	o	m	100	"	same	lumberman	not answered	---	
Timber boss	454 23	"	---	"	---	15	m	m	---	---	---	---	---	1	4	3	12	10	50 00	"	600 00	o	m	---	"	"	"	---	---	
Timberman	455 20	"	---	"	---	---	s	s	---	---	---	---	---	---	2	2	13	10	45 00	"	540 00	o	m	---	"	"	"	---	---	
Blacksmith	456 21	"	---	"	---	---	s	s	---	---	---	---	---	---	4	4	12	10	52 00	"	624 00	o	m	---	"	"	"	---	---	
helper	457 30	"	---	"	---	2	s	s	---	---	---	---	---	---	15	2	12	10	52 00	"	634 00	o	m	225	"	same	carpenter	\$10 00 per mo	---	
Carpenter	458 17	"	---	"	---	---	s	s	---	---	---	---	---	---	2	2	13	10	33 00	"	384 00	o	m	---	"	"	"	---	---	
Drill boy	459 16	"	---	"	---	---	s	s	---	---	---	---	---	---	3	3	13	10	33 00	"	384 00	o	m	---	"	"	"	---	---	
"	460 17	"	---	"	---	---	s	s	---	---	---	---	---	---	5	5	5	10	32 00	"	160 00	o	m	---	"	not answ'd	"	---	---	
"	461 17	"	---	"	---	---	s	s	---	---	---	---	---	---	2	2	12	10	32 00	"	384 00	o	m	---	"	same	"	---	---	
"	462 19	"	---	"	---	---	s	s	---	---	---	---	---	---	1	1	13	10	32 00	"	384 00	o	m	---	"	not answ'd	"	---	---	
"	463 17	"	---	"	---	---	s	s	---	---	---	---	---	---	8	3	13	10	33 00	"	384 00	o	m	---	"	same	"	---	---	
Mining captain	464 51	"	---	"	---	---	m	m	---	---	---	---	---	6	28	5	13	10	100 00	"	1,200 00	o	m	500	"	better	not answ'd	not answered	---	
"	465 16	"	---	"	---	---	s	s	---	---	---	---	---	---	5	5	12	10	32 00	"	160 00	o	m	---	"	not answ'd	"	---	---	
"	466 17	"	---	"	---	---	s	s	---	---	---	---	---	---	2	2	12	10	32 00	"	384 00	o	m	---	"	same	"	---	---	
"	467 19	"	---	"	---	---	s	s	---	---	---	---	---	---	1	1	13	10	32 00	"	384 00	o	m	---	"	not answ'd	"	---	---	
"	468 51	"	---	"	---	---	s	s	---	---	---	---	---	---	8	3	13	10	33 00	"	384 00	o	m	---	"	same	"	---	---	
Miner	469 49	"	---	"	---	---	m	m	---	---	---	---	---	6	28	5	13	10	100 00	"	1,200 00	o	m	500	"	better	not answ'd	not answered	---	
"	470 41	"	---	"	---	---	m	m	---	---	---	---	---	5	33	3	12	10	50 00	"	600 00	o	m	150	"	same	miner	\$16 00 per mo	---	
"	471 48	"	---	"	---	---	m	m	---	---	---	---	---	6	27	2	12	10	55 00	"	660 00	o	m	100	"	"	"	15 00	---	
"	472 51	"	---	"	---	---	m	m	---	---	---	---	---	4	35	4	12	10	48 00	"	576 00	o	m	150	"	"	"	25 00	---	
"	473 42	"	---	"	---	---	m	m	---	---	---	---	---	5	24	11	12	10	48 00	"	576 00	o	m	150	"	"	"	15 00	---	
"	474 51	"	---	"	---	---	m	m	---	---	---	---	---	1	30	12	12	10	55 00	"	660 00	o	m	300	"	"	miner	15 00	---	

TABLE NO. 7.—Continued.

Occupation.	Line number.	How many hours for a day's work in the old country.	Amount of money at interest or in the bank.	If foreign born, how much money did you have on arrival in U. S.	Do you own your home. If so, its value.	If mortgaged, amount of mortgage.	Rate of interest.	Are you as well off as five years ago.	Loss of time.			If renting home, monthly rental.	If boarding, cost per week, including room.	Life insurance, how much.	Do you belong to a benefit society.	Weekly benefit in case of sickness or accident.	Have you a sewing machine.	Have you a piano.	Have you an organ.	Do you take a newspaper.			Age began work.	State of health then.	State of health now.	Amount of relief rendered friends in the old country.	Amount of money furnished to friends for passage to U. S.
									From sickness — (Days)	Inability to obtain work. — (Days.)	Causes not stated. — (Days.)									Daily.	Weekly.	Monthly.					
Tramrer	391	16	*	15				yes			\$5 00	\$4 00		yes	\$6 00	no	no	no	no	no	no	12	good	good			
	392	12	*	17				"				4 00		"	6 00	"	"	"	"	"	"	16	"	"			
	393	16	*					"				4 00		"	6 00	"	"	"	"	"	"	10	"	"			
	394	14	*	17				"						"	6 00	"	"	"	"	"	"	13	"	"	\$100		
	395	14						"				4 50		"	6 00	"	"	"	"	"	"	12	"	"			
	396	14		27				"						"	6 00	"	"	"	"	"	"	11	"	"			
	397	14		30	\$300			"	61	25	93	8 00		yes	3 00	yes	"	"	"	yes	"	14	"	"	50		
	398	12	\$700		no			"	73	44	44	2 00		"	2 25	"	"	"	"	"	no	"	10	"	"	49	\$91
	399	12	500					b't'r	4	13	8			"	6 25	"	"	"	"	"	"	16	"	"		25	
	400	13											4 25		"	4 50	no	"	"	"	yes	15	"	"	100	25	
	401	12		12	"			yes	18	14	14	2 00			"	8 50	no	"	"	"	"	15	"	"			
	402	13			"			b't'r	14	18	18	3 00			"	6 25	"	"	"	"	no	7	"	"	10		
	403	12			"			"	21	26	26	4 00			"	5 00	yes	"	"	"	"	15	"	"	30		
	404	13		15	700	150	5	"	40		12		4 25		"	8 50	"	"	"	"	"	16	"	"	25		
	405				no										"	4 50	no	"	"	"	"		"	"			
	406	12		21	"				7	12	7	4 00			"	8 50	"	"	"	"	"	10	"	"	80	64	
	407	12		60	"			b't'r	12	2		5 00			"	8 50	yes	"	"	"	"	10	"	"		45	
	408	12	300	340	"			"	28	18	25	4 00	5 00		"	8 50	no	"	"	"	"	14	"	"	95	68	
	409	18	600	40	"			b't'r	17	10					"	8 50	"	"	"	yes	no	9	"	"	70	40	
	410	10		14	"			yes	18	16	11	4 00			"	9 00	yes	"	yes	"	"	10	"	"	45	48	
Laborer	411	18		18	"			b't'r	24	52	16	3 00			"	4 50	"	"	"	"	"	15	"	"			
	412	13	600	30	"			yes	7	5		4 00	5 00		"	6 25	"	"	"	"	no	10	"	"	40	43	
	413	12		30	"			b't'r	3	10					"	6 25	no	"	"	"	yes	10	"	"	30		
	414	12	600	8	"			"	10	8		3 00			"	6 25	yes	"	"	"	"	12	"	"			
	415	12		40	"			yes	6	13			5 00		"	8 50	no	"	"	"	"	14	"	"			
	416	10	600	20	"			yes	36	48		2 00		1,000	"	6 25	yes	"	"	"	"	8	"	"			
	417	10			"			"	52	13		3 00			"	4 50	"	"	"	"	"	15	"	"	15	35	
	418	10			"			"	24	72	5	2 00			"	8 50	"	"	"	"	no	8	"	"	50	168	
	419	10			"			"	121	18	10	2 00			"	2 25	no	"	"	"	yes	14	"	"			
	420	13		10	"			b't'r	13	37	14	4 00			"	9 00	"	"	"	"	no	10	"	"	20	115	
	421	13		5	400	80	8	b't'r	26	18	12				"	6 25	yes	"	"	"	yes	12	"	"			
	422	12		18	no			yes	8	18		3 00			"	8 50	"	"	"	"	"	14	"	"			
	423	18		36	"				13		12				"	8 50	"	"	"	"	no	10	"	"	25		
	424	18		36	"										"		"	"	"	"	"	10	"	"			

TABLE NO. 7.—Continued.

Occupation.	Line number.	Age.	Native.	Native of parents.	How long in U. S., if foreign born.—(Years.)	Married or single.	How many children in family.	How many attend school.	How many depend on you for support.	How many years at present occupation.	How long with present employer.—(Years.)	Number of months employed during year.	How many hours for a day's work.	Wages paid.	Annual earnings.	Are you paid cash or trade.	How often are you paid.	Amount saved during the year.	How do wages compare with former years in this country.	What occupation did you follow in the old country.	Wages received in the old country.
Miner	469 38	England	England	England	19	m	4	1	3	19	17	12	10	\$40 00 pr m	\$600 00	c	m	\$400	less	farmer	\$40 00 per year
"	470 25	Finland	Finland	Finland	5	m	2	3	3	8	5	12	10	48 00 "	576 00	c	m	250	same	laborer	40 00 "
Trammer	471 34	"	"	"	15	m	4	3	5	6	4	12	10	48 00 "	576 00	c	m	200	not answ'd	farmer	100 00 "
"	472 38	Austria	Austria	Austria	3	s	5	1	6	3	4	12	8	53 00 "	636 00	c	m	250	same	"	40 00 "
"	473 23	"	"	"	3	s	5	1	6	3	4	12	8	53 00 "	636 00	c	m	250	same	"	40 00 "
"	474 24	"	"	"	4	s	8	—	—	4	4	12	8	53 00 "	636 00	c	m	250	"	"	40 00 "
"	475 28	"	"	"	6	m	8	—	—	4	4	12	8	53 00 "	636 00	c	m	250	"	"	40 00 "
"	476 33	Italy	Italy	Italy	5	m	—	—	—	4	4	12	8	53 00 "	636 00	c	m	200	"	"	40 00 "
"	477 25	"	"	"	3	m	—	—	—	2	2	12	8	53 00 "	636 00	c	m	200	"	"	40 00 "
"	478 27	"	"	"	2	m	—	—	—	2	2	12	8	53 00 "	636 00	c	m	200	"	"	40 00 "
"	479 22	"	"	"	1	s	2	—	—	1	1	1	8	53 00 "	53 00	c	m	200	same	mechanic	40 00 "
Laborer	480 34	Germany	Germany	Germany	17	m	2	—	8	11	11	12	8	53 00 "	636 00	c	m	200	same	taylor	18 00 per mo 12 00 "
"	481 50	"	"	"	27	m	2	—	1	27	10	12	10	48 00 "	576 00	c	m	200	"	"	"
"	482 26	U. S.	U. S.	"	—	m	2	—	3	8	3	12	10	45 00 "	540 00	c	m	—	"	"	"
"	483 18	"	Norway	Norway	—	s	—	—	—	2	2	12	10	39 00 "	468 00	c	m	—	"	"	"
"	484 54	Norway	Norway	"	22	m	6	2	6	20	20	12	10	39 00 "	468 00	c	m	200	"	not answ'd	not answered
"	485 20	U. S.	U. S.	England	—	s	—	—	—	2	2	12	10	39 00 "	468 00	c	m	150	better	not answ'd	not answered
"	486 41	Scotland	Scotland	Scotland	18	m	2	2	3	18	13	12	10	45 00 "	540 00	c	m	200	same	farmer	not answered
"	487 38	Italy	Italy	Italy	2	s	—	—	—	2	2	12	10	48 00 "	576 00	c	m	100	"	board	40 00 per year
"	488 35	Finland	Finland	Finland	5	m	3	1	4	3	3	12	10	39 00 "	468 00	c	m	100	"	laborer	40 00 "
"	489 45	"	"	"	3	m	3	1	4	8	3	12	10	39 00 "	468 00	c	m	100	"	"	40 00 "
"	490 49	"	"	"	8	m	2	—	3	8	8	12	10	39 00 "	468 00	c	m	—	"	farmer	40 00 self
"	491 37	"	"	"	8	m	2	—	3	6	6	12	10	39 00 "	468 00	c	m	—	"	"	40 00 per year
"	492 38	"	"	"	8	m	3	1	4	7	7	12	10	39 00 "	468 00	c	m	50	"	policeman	60 00 per year
"	493 45	"	"	"	6	m	7	2	8	6	6	12	10	48 00 "	576 00	c	m	100	less	fishng	not answered
Mine laborer	494 31	Sweden	Sweden	Sweden	15	m	2	1	3	1	1	12	10	39 00 "	468 00	c	m	—	"	not answ'd	"
Laborer	495 84	Spain	Spain	Spain	66	m	—	—	—	20	20	12	10	39 00 "	468 00	c	m	100	"	"	"
"	496 38	Austria	Austria	Austria	8	m	8	—	4	1	7	12	10	47 00 "	564 00	c	m	100	"	farmer	"
"	497 54	France	France	France	19	m	7	3	6	17	17	12	10	39 00 "	468 00	c	m	100	"	soldier	"
"	498 21	Norway	Norway	Norway	17	s	4	—	5	1	8	12	10	39 00 "	468 00	c	m	—	same	farmer	20 00 per year
"	499 39	Poland	Poland	Poland	14	m	4	2	5	9	9	12	10	39 00 "	468 00	c	m	75	less	"	26 00 "
"	500 37	"	"	"	7	m	4	—	5	6	6	12	10	35 00 "	420 00	c	m	20	not answ'd	carpenter	30 00 per mo
"	501 38	"	"	"	8	m	8	1	3	8	8	12	10	40 00 "	480 00	c	m	200	same	"	"

"	503 40	"	U. S.	"	U. S.	7	m	4	1	5	7	7	"	12	10	48 00	"	576 00	c	m	200	"	less same	laborer	26 00 per year
"	503 34	"	U. S.	"	U. S.	---	m	7	4	8	1	1	"	12	10	40 00	"	480 00	c	m	*	same	---	---	
"	504 18	"	"	"	Ireland	---	s	---	---	---	1 1/2	2	"	12	10	25 00	"	300 00	c	m	*	less	---	---	
"	505 38	"	"	"	"	---	m	6	3	7	8	8	"	10 1/2	6	47 00	"	481 25	c	m	*	less	---	---	
"	506 8	"	"	"	"	---	s	---	---	---	1	1	"	12	10	33 00	"	394 00	c	m	*	same	---	---	
Trammer	507 35	Germany	Germany	Finland	Finland	9	m	5	---	6	9	9	"	12	8	53 00	"	636 00	c	m	75	"	farmer	8 00 per mo	
"	507 24	Finland	"	"	"	4	s	---	---	---	1 1/2	1 1/2	"	9	8	53 00	"	477 00	c	m	200	"	laborer	10 40 "	
"	508 33	"	"	"	"	7	m	8	---	4	8	8	"	12	10	53 00	"	636 00	c	m	100	"	"	10 40 "	
"	510 45	"	"	"	"	7	m	6	---	6	6	1	"	12	10	53 00	"	636 00	c	m	160	higher	farmer	20 00 per year	
"	511 31	Austria	Austria	"	"	1	s	---	---	---	1	1	"	12	8	42 00	"	504 00	c	m	200	same	"	20 00 "	
"	512 39	Poland	Poland	Poland	Poland	14	m	6	3	6	14	11	"	12	8	53 00	"	636 00	c	m	75	"	"	10 00 per mo	
"	513 31	"	"	"	"	7	m	3	---	4	1	1	"	12	10	42 00	"	504 00	c	m	---	higher	"	26 00 per year	
"	514 33	"	"	"	"	4	m	2	---	8 1/2	4	4	mo	4	10	42 00	"	168 00	c	m	---	---	"	26 00 "	
Miner	515 20	Norway	Norway	Finland	Finland	17	s	---	---	---	1	1	"	12	10	43 00	"	516 00	c	m	150	same	laborer	10 40 per mo	
"	516 20	Finland	"	"	"	2	s	---	---	---	1	1	"	12	10	45 00	"	540 00	c	m	200	"	---	---	
"	517 41	"	"	"	"	15	m	6	2	6	14	14	"	12	10	55 00	"	660 00	c	m	200	"	shoemaker	10 00 "	
"	518 49	"	"	"	"	8	m	6	4	5	3	1	"	12	10	47 00	"	564 00	c	m	500	"	farmer	not answered	
"	519 33	England	England	"	"	10	m	8	4	6	40	7	"	12	10	47 00	"	564 00	c	m	350	"	miner	15 00 per mo	
"	520 38	"	"	"	"	9	m	8	2	4	20	5	"	12	10	50 00	"	600 00	c	m	100	"	"	20 00 "	
"	521 35	"	"	"	"	25	m	2	2	3	20	18	"	12	10	48 00	"	576 00	c	m	100	"	---	---	
"	522 15	"	"	"	"	23	m	6	4	6	22	5	"	12	10	47 00	"	564 00	c	m	300	"	miner	15 00 per mo	
"	523 45	"	"	"	"	2	m	---	---	---	30	2	"	12	10	47 00	"	564 00	c	m	225	"	"	15 00 "	
"	524 21	U. S.	U. S.	"	"	---	s	---	---	---	3	3	"	12	10	47 00	"	564 00	c	m	---	higher	---	---	
"	525 24	"	"	"	"	---	s	---	---	---	7	7	"	12	10	47 00	"	564 00	c	m	200	same	---	---	
"	526 26	"	"	"	"	---	s	---	---	---	7	7	"	12	10	47 00	"	564 00	c	m	225	"	---	---	
"	527 46	Ireland	Ireland	"	"	25	m	3	---	---	20	9	"	12	10	47 00	"	564 00	c	m	300	"	sailor	not answered	
"	528 20	"	"	"	"	13	m	---	---	1	1 1/2	1	"	12	10	47 00	"	141 00	c	m	*	same	---	---	
Drill boy	529 16	Poland	Poland	Finland	Finland	7	s	---	---	---	8	1	"	12	10	32 00	"	384 00	c	m	*	"	---	---	
"	529 14	Finland	"	"	"	10	s	---	---	---	4	4	"	12	10	25 00	"	300 00	c	m	*	"	---	---	
"	531 13	England	England	"	"	---	s	---	---	---	---	---	"	12	10	25 00	"	300 00	c	m	*	"	---	---	
"	532 16	U. S.	U. S.	"	"	---	s	---	---	---	1	1	"	12	10	25 00	"	300 00	c	m	---	"	---	---	
Machinist	533 29	"	"	"	"	---	s	---	---	---	1	8	mo	8	10	45 00	"	360 00	c	m	200	"	---	---	
"	534 6	"	"	"	"	---	s	---	---	---	2	2	"	2	10	26 00	"	52 00	c	m	*	"	---	---	
"	535 19	England	England	"	"	14	s	---	---	---	1 1/2	1 1/2	yr	12	10	26 00	"	312 00	c	m	*	"	---	---	
"	536 17	France	France	"	"	21	m	---	---	1	15	15	"	12	10	60 00	"	720 00	c	m	300	"	machinist	18 00 per mo	
Fireman	537 19	U. S.	U. S.	Ireland	Ireland	---	s	---	---	---	4	4	"	12	10	36 00	"	432 00	c	m	---	"	---	---	
"	537 21	England	England	"	"	17	s	---	---	---	1	7	"	12	10	36 00	"	432 00	c	m	125	higher	sailor	not answered	
Mining splicer	538 12	"	"	"	"	13	m	3	---	4	13	8	"	12	10	50 00	"	600 00	c	m	225	same	---	---	
Clerk	540 17	U. S.	U. S.	Finland	Finland	---	s	---	---	---	1	1	"	12	10	35 00	"	420 00	c	m	*	"	not ans'w'd	farmer	10 00 per mo
Timberman helper	541 32	Finland	"	"	"	7	m	1	---	1 1/2	1 1/2	4	mo	12	10	45 00	"	540 00	c	m	---	not ans'w'd	---	---	
Lander	542 5	Poland	Poland	"	"	8	m	8	---	4	1	1	yr	12	10	27 00	"	324 00	c	m	---	less	carpenter	28 00 per year	
Trammer boss	543 16	Norway	Norway	"	"	6	m	8	4	9	1	1	"	12	10	52 00	"	624 00	c	m	---	not ans'w'd	fireman	30 00 per mo	
Engineer	544 41	"	"	"	"	20	m	5	3	6	3	8	"	12	10	50 00	"	610 00	c	m	---	same	farmer	100 00 per year	
Timberman helper	545 24	Italy	Italy	"	"	4	s	---	---	---	1 1/2	1 1/2	"	12	10	48 00	"	576 00	c	m	---	"	---	not answered	
"	546 22	Finland	Finland	"	"	2	s	---	---	---	1	1	"	12	10	48 00	"	576 00	c	m	---	"	---	not answered	

Father takes his wages.

TABLE No. 7.—Continued.

Occupation.	Line number.	How many hours for a day's work in the old country.	Amount of money at interest or in the bank.	If foreign born, how much money did you have on arrival in U. S.	Do you own your home. If so, its value.	If mortgaged, amount of mortgage.	Rate of interest.	Are you as well off as five years ago.	Loss of time.			If renting home, monthly rental.	If boarding, cost per week, including room.	Life insurance, how much.	Do you belong to a benevolent society.	Weekly benefit in case of sickness or accident.	Have you a sewing machine.	Have you a piano.	Have you an organ.	Do you take a newspaper.			Age began work.	State of health then.	State of health now.	Amount of relief rendered friends in the old country.	Amount of money furnished to friends for passage to U. S.
									From sickness.—(Days.)	Inability to obtain work.—(Days.)	Causes not stated.—(Days.)									Daily.	Weekly.	Monthly.					
Miner	469	14	+	\$20	no			yes			\$4 00				yes	\$6 00	yes	no	no	no	no	19	good	good			
"	470	14	+	30	\$300			"			6 00		\$1,000	"	"	6 00	"	"	"	"	"	11	"	"			
Trammer	471	12	+		no			"			3 00				"	6 00	no	"	"	"	"	12	"	"			
"	472	14	+	10	"			"			\$4 00				"	6 00	"	"	"	"	"	6	"	"			
"	473	14	+		"			"							"	6 00	"	"	"	"	"	12	"	"			
"	474	14	+	+	"			"			3 00	4 00	1,000	"	"	6 00	yes	"	"	"	"	7	"	"			
"	475	14	+	15	"			"							"	6 00	yes	"	"	"	"	12	"	"			
"	476	14	+		"			"			4 00	4 00			"	6 00	no	"	"	"	"	11	"	"	\$190		
"	477	14	+		"			"			4 00	4 00			"	6 00	"	"	"	"	"	11	"	"	200		
"	478	14	+	11	"			"							"	6 00	"	"	"	"	"	11	"	"			
"	479	10	+	12	"			"			3 00	4 00	1,000	"	"	6 00	"	"	"	"	"	12	"	"			
Laborer	480	10	+	100	700			"							"	6 00	yes	"	"	"	"	15	"	"			
"	481	10	+		no			"							"	6 00	"	"	"	"	"	12	"	"			
"	482		+		"			"							"	6 00	"	"	"	"	"	16	"	"			
"	483							"							"	6 00	no	"	"	"	"		"	"			
"	484		+		800			yes					1,000	"	"	6 00	"	"	"	"	"	12	"	"			
"	485				no			"							"	6 00	"	"	"	"	"	18	"	"			
"	486	8	+	+	750			yes				4 00			"	6 00	yes	"	"	"	"	11	"	"			
"	487	14	+	30	no			"			3 00				"	6 00	no	"	"	"	"	11	"	"			
"	488	12	+	40	"			"			3 00				"	6 00	yes	"	"	"	"	12	"	"			
"	489	14	+		"			"							"	6 00	"	"	"	"	"		"	"			
"	490		+	60	2,000			"			3 00				"	6 00	no	"	yes	"	yes	12	"	"			
"	491	14	+	25	no			"			5 00				"	6 00	yes	"	"	yes	no	10	"	"			
"	492	14	+		"			"			3 00				"	6 00	"	"	"	"	"	12	"	"			
Mine laborer	493	14	+		"			"					1,000	"	"	6 00	"	"	"	"	"	7	"	"			
Laborer	494	14	+		"			"				4 50			"	6 00	no	"	"	"	"	9	"	"			
"	495		+		"			"							"	6 00	"	"	"	"	"		"	"			
"	496		+		"			"			8 00		1,000	"	"	6 00	yes	"	"	"	"	12	"	"			
"	497		+	25	"			"			5 00				"	6 00	no	"	"	"	"	11	"	"			
"	498		\$100		"			"			4 00				"	6 00	"	"	"	"	"	14	"	"			
"	499	12	+	18	"			"			3 00				"	6 00	yes	"	"	"	"	9	"	"			
"	500	12	+	11	"			"			2 00				"	6 00	"	"	"	"	"	11	"	"			
"	501	12	+	23	"			"							"	6 00	"	"	"	"	"	8	"	"			

TABLE No. 7.—Continued.

Occupation.	Line number.	Age.	Nativity.	Nativity of parents.	How long in U. S., if foreign born.—(Years.)	Married or single.	How many children in family.	How many attend school.	How many depend on you for support.	How many years at present occupation.	How long with present employer.—(Years.)	Number of months employed during year.	How many hours for a day's work.	Wages paid.	Annual earnings.	Are you paid cash or trade.	How often are you paid.	Amount saved during the year.	How do wages compare with former years in this country.	What occupation did you follow in the old country.	Wages received in the old country.
Timberman.	547	38	Finland.	Finland.	2	m	1	1	1	1	1	12	10	\$48 00	\$76 00	c	m	.....	less	laborer	\$40 00 per year
"	548	30	"	"	2	m	1	1	1	1	1	12	10	48 00	76 00	c	m	.....	same	"	40 00 "
"	549	36	"	"	2	m	1	1	1	1	1	12	10	48 00	76 00	c	m	.....	not ans'd	"	40 00 "
"	550	40	"	"	2	m	1	1	1	1	1	12	10	48 00	76 00	c	m	.....	same	"	40 00 "
"	551	28	"	"	2	m	1	1	1	1	1	10	10	48 00	916 00	c	m	.....	not ans'd	farmer	not answered
Blaster.	552	42	Norway.	Norway.	19	m	8	2	8	9	9	12	10	55 00	660 00	c	m	\$500	same	miner	26 00 per mo
Fireman	553	50	England	England	24	m	8	1	1	2	9	12	10	56 00	672 00	c	m	200	"	"	15 00 "
Carpenter	554	25	U. S.	Ireland	.....	s	.....	.....	.....	4	4	12	10	52 00	624 00	c	m	225	higher	"	.....
Miner	555	37	England	England	8	m	8	.....	.....	9	8	12	10	55 00	660 00	c	m	225	same	miner	15 00 per mo
"	556	34	"	"	8	m	8	.....	.....	4	9	12	10	55 00	660 00	c	m	150	"	"	15 00 "
"	557	27	"	"	15	m	5	2	6	20	22	12	10	55 00	660 00	c	m	100	"	"	15 00 "
"	558	27	"	"	12	m	2	.....	.....	17	12	12	10	48 00	576 00	c	m	125	less	"	15 00 "
"	559	35	"	"	12	s	2	.....	.....	14	2	12	10	55 00	660 00	c	m	20	same	"	30 00 "
"	560	33	"	"	1	m	.....	.....	.....	9	1	12	10	47 00	564 00	c	m	150	"	fishing laborer	not answered
"	561	41	Finland.	Finland.	8	m	8	.....	.....	9	7	12	10	50 00	600 00	c	m	.....	"	"	40 00 per year
"	562	30	"	"	7	m	1	.....	.....	2	9	12	10	50 00	600 00	c	m	.....	"	farmer	100 00 "
"	563	38	"	"	9	m	2	.....	.....	3	7	12	10	50 00	610 00	c	m	.....	"	"	100 00 "
"	564	37	"	"	18	m	8	.....	.....	14	16	12	10	55 00	660 00	c	m	200	not ans'd	"	100 00 "
"	565	14	"	"	11	m	8	.....	.....	10	10	12	10	50 00	600 00	c	m	100	less	"	100 00 "
"	566	12	"	"	8	m	.....	.....	.....	8	8	12	10	50 00	610 00	c	m	200	same	laborer	40 00 "
"	567	37	"	"	9	m	.....	.....	.....	12	8	12	10	48 00	610 00	c	m	.....	not ans'd	fisherman	12 00 per mo
"	568	35	"	"	8	m	.....	.....	.....	12	8	12	10	48 00	576 00	c	m	.....	same	laborer	40 00 per year
"	569	35	Ireland	Ireland	55	m	7	.....	.....	8	15	12	10	50 00	600 00	c	m	.....	"	"	.....
"	570	14	"	"	2	m	4	.....	.....	7	7	12	10	50 00	600 00	c	m	100	"	"	.....
"	571	41	Norway.	Norway.	8	m	8	.....	.....	6	2	11	10	55 00	632 50	c	m	200	higher	sailing	12 50 per mo
Laborer boss.	572	12	Finland.	Finland.	6	m	1	.....	.....	1	2	12	10	70 00	840 00	c	m	200	"	carpenter	10 00 "
Mine laborer.	573	23	Sweden	Sweden	1	s	.....	.....	.....	1	1	12	10	48 00	48 00	c	m	150	same	farming	200 00 per year
"	574	23	"	"	1	s	.....	.....	.....	1	1	12	10	48 00	576 00	c	m	.....	"	"	200 00
"	575	23	"	"	5	s	.....	.....	.....	1	1	12	10	48 00	576 00	c	m	200	"	"	w'r'd for father
"	576	22	"	"	2	s	.....	.....	.....	2	2	12	10	48 00	576 00	c	m	225	"	"	200 00 per year
"	577	23	"	"	2	s	.....	.....	.....	2	2	12	10	48 00	576 00	c	m	100	not ans'd	"	300 00
Laborer.	578	23	"	"	8	m	1	.....	.....	3	3	12	6	45 00	540 00	c	m	.....	less	blacksmith	12 00 per mo
"	579	22	Denmark	Denmark	2	s	.....	.....	.....	2	2	12	10	45 00	540 00	c	m	.....	not ans'd	"	12 50 "
"	580	40	Canada.	Canada.	20	m	6	2	7	15	16	11	10	40 00	450 00	c	m	.....	less	farming	100 00 per year

" "	Drill boy	580 17	England	1	1	1	1	13	10	25 00	"	420 00	c	m	same	miner	6 00 per mo
		581 23	Finland	2	2	2	2	12	10	45 00	"	540 00	c	m	less	farmer	100 00 per year
		582 28	Canada	7	3	4	1	13	10	45 00	"	340 00	c	m	same		
		583 16	U. S.	...	...	...	...	12	10	32 00	"	384 00	c	m			
		584 14	"	...	1	1	1	13	10	32 00	"	...	c	m			
" "	Trammer	585 33	Italy	14	2	2	1	10	8	53 00	"	530 00	c	m	"	farmer	100 00 per year
		586 28	Austria	6	2	2	1	8	8	53 00	"	463 76	c	m	"	"	28 00
		587 30	Finland	2	2	2	1	10	8	50 00	"	526 00	c	m	not ans'd	laborer	40 00
		588 28	"	6	...	...	...	13	8	53 00	"	563 00	c	m	same	farmer	40 00
		589 27	"	1	...	...	...	13	10	53 00	"	686 00	c	m			100 00
" "	" "	590 23	Sweden	2	2	2	2	2	8	53 00	"	106 00	c	m		"	200 00
		591 19	"	2	2	2	2	2	8	53 00	"	106 00	c	m		laborer	18 00
		592 23	"	2	2	2	2	2	8	53 00	"	106 00	c	m		miner	26 00
		593 22	"	2	1	1	1	12	8	53 00	"	626 00	c	m	not ans'd	farmer	200 00
		594 23	"	1	1	1	1	12	8	53 00	"	686 00	c	m	same	"	200 00
" "	Miner	595 50	England	39	35	40	30	12	10	50 00	"	600 00	c	m	"	miner	15 00 per mo
		596 54	"	30	...	...	...	12	10	45 00	"	540 00	c	m	less	"	15 00
		597 32	"	12	20	1	1	12	10	45 00	"	50 00	c	m	"	"	15 00
		598 46	"	20	28	16	1	12	10	45 00	"	480 00	c	m	"	"	15 00
		599 44	"	1	31	1	1	11	10	45 00	"	495 00	c	m		"	17 00
" "	" "	600 55	"	34	40	2	2	12	10	45 00	"	540 00	c	m	less	"	15 00
		601 44	"	20	32	7	7	12	10	45 00	"	540 00	c	m	"	"	15 00
		602 46	"	18	34	18	1	12	10	40 00	"	480 00	c	m	"	"	15 00
		603 25	"	32	20	1	1	12	10	45 00	"	540 00	c	m	same		
		604 22	U. S.	...	7	1	1	12	10	50 00	"	600 00	c	m			
" "	Laborer	605 29	"	...	1	18	18	12	10	45 00	"	540 00	c	m	less		
		606 18	"	...	...	1	1	6	10	35 00	"	227 50	c	m	same		
		607 18	"	...	...	1	1	12	10	38 00	"	396 00	c	m	not ans'd		
		608 26	Poland	14	7	7	7	11	10	36 00	"	396 00	c	m	less	laborer	11 70 per mo
		609 36	"	7	...	...	...	11	10	39 00	"	438 76	c	m			
" "	Trammer	610 51	"	14	5	8	5	11	10	39 00	"	448 50	c	m	"	"	18 00
		611 38	"	8	3	1	1	10	10	40 00	"	430 00	c	m	"	"	15 00
		612 38	"	14	6	6	6	11	10	54 00	"	607 50	c	m	"	"	10 40
		613 38	"	13	8	8	8	11	10	52 00	"	585 00	c	m	"	"	10 40
		614 46	"	12	...	...	...	11	10	40 00	"	450 00	c	m	"	"	18 00
" "	" "	615 34	"	12	7	8	8	11	10	52 00	"	585 00	c	m	"	"	15 00
		616 36	"	8	6	6	4	11	10	52 00	"	585 00	c	m	same	farmer	not answered
		617 28	"	5	3	3	3	11	10	38 00	"	437 00	c	m	less	laborer	18 00 per mo
		618 33	"	9	7	7	7	11	10	48 00	"	552 00	c	m	"	"	10 40
		619 32	"	7	...	...	...	11	10	45 00	"	503 25	c	m	less	"	7 00
" "	" "	620 24	"	8	2	2	2	11	10	46 00	"	529 00	c	m	not ans'd	"	11 70
		621 24	"	14	5	5	5	11	10	46 00	"	517 50	c	m	less		
		622 36	"	13	7	7	7	11	10	48 00	"	552 00	c	m	same	laborer	7 80 per mo
		623 27	"	2	1	1	1	6	10	48 00	"	324 00	c	m	less		8 00
		624 27	"	10	7	7	7	11	10	48 00	"	528	c	m			

TABLE NO. 7.—Continued.

Occupation.	Line number.	How many hours for a day's work in the old country.	Amount of money at interest or in the bank.	If foreign born, how much money did you have on arrival in U. S.	Do you own your home. If so, its value.	If mortgaged, amount of mortgage.	Rate of interest.	Are you as well off as five years ago.	Loss of time.			If renting home, monthly rental.	If boarding, cost per week, including room.	Life insurance, how much.	Do you belong to a benefit society.	Weekly benefit in case of sickness or accident.	Have you a sewing machine.	Have you a piano.	Have you an organ.	Do you take a newspaper.			Age began work.	State of health then.	State of health now.	Amount of relief rendered friends in the old country.	Amount of money furnished to friends for passage to U. S.
									From sickness—(Days.)	Inability to obtain work—(Days.)	Causes not stated.—(Days.)									Daily.	Weekly.	Monthly.					
Timberman.....	547	16	.....	.....	no	.....	.....	yes	.....	.....	.....	.....	\$4 00	.....	yes	00	no	no	no	no	no	14	good	.....	.....
".....	548	16	.....	.....	"	.....	.....	"	.....	.....	.....	.....	4 00	.....	"	00	"	"	"	"	"	10	"	.....	.....
".....	549	16	.....	.....	"	.....	.....	"	.....	.....	.....	.....	4 00	.....	"	00	"	"	"	"	"	18	"	.....	.....
".....	550	16	.....	.....	"	.....	.....	"	.....	.....	.....	.....	6 00	.....	"	00	"	"	"	"	"	10	"	.....	.....
".....	551	14	.....	.....	"	.....	.....	"	.....	.....	.....	.....	6 00	.....	"	00	yes	yes	yes	yes	yes	14	"	.....	.....
Blaster.....	552	12	.....	\$50	\$500	.....	.....	"	.....	.....	.....	.....	.....	.....	"	00	"	"	no	no	no	16	"	.....	.....
Fireman.....	553	8	.....	+	500	.....	.....	"	.....	.....	.....	.....	.....	.....	"	00	"	"	"	"	"	15	"	.....	.....
Carpenter.....	554	.....	.....	.....	no	.....	.....	"	.....	.....	.....	.....	4 50	.....	"	00	no	"	"	"	"	16	"	.....	.....
Miner.....	555	8	.....	.....	20	.....	.....	"	.....	.....	.....	.....	.....	.....	"	00	yes	"	"	"	"	9	"	.....	.....
".....	556	8	.....	.....	750	.....	.....	"	.....	.....	.....	.....	.....	.....	"	00	yes	"	"	"	"	12	"	.....	.....
".....	557	8	.....	.....	1,000	.....	.....	"	.....	.....	.....	.....	.....	.....	"	00	"	"	"	"	"	7	"	.....	.....
".....	558	8	.....	.....	600	.....	.....	"	.....	.....	.....	.....	.....	.....	"	00	"	"	"	"	"	10	"	.....	.....
".....	559	10	.....	.....	no	.....	.....	"	.....	.....	.....	.....	4 00	.....	"	00	no	"	"	"	"	11	"	.....	.....
".....	560	.....	.....	.....	"	.....	.....	"	.....	.....	.....	.....	.....	.....	"	00	yes	"	"	yes	"	12	"	.....	.....
".....	561	14	.....	.....	"	.....	.....	"	.....	.....	.....	.....	.....	.....	"	00	yes	"	"	"	"	14	"	.....	.....
".....	562	14	.....	.....	"	.....	.....	yes	.....	.....	.....	.....	.....	.....	"	00	"	"	"	yes	"	10	"	.....	.....
".....	563	14	.....	.....	900	.....	.....	"	.....	.....	.....	.....	.....	.....	"	00	"	"	"	"	"	10	"	.....	.....
".....	564	12	.....	.....	1,200	.....	.....	"	.....	.....	.....	.....	.....	.....	"	00	"	"	"	"	"	16	"	.....	.....
".....	565	14	.....	.....	1,000	.....	.....	"	.....	.....	.....	.....	.....	.....	"	00	"	"	"	yes	"	10	"	.....	.....
".....	566	.....	.....	.....	1,500	.....	.....	"	.....	.....	.....	.....	.....	.....	"	00	no	"	"	yes	"	10	"	.....	.....
".....	567	14	.....	.....	no	.....	.....	"	.....	.....	.....	.....	.....	.....	"	00	"	"	"	"	"	10	"	.....	.....
".....	568	.....	.....	.....	"	.....	.....	"	.....	.....	.....	.....	.....	.....	"	00	yes	"	"	no	"	16	"	.....	.....
".....	569	.....	.....	.....	"	.....	.....	"	.....	.....	.....	.....	.....	.....	"	00	"	"	"	"	"	12	"	.....	.....
".....	570	.....	.....	.....	700	.....	.....	"	.....	.....	.....	.....	.....	.....	"	00	"	"	"	yes	"	16	"	.....	.....
Laborer boss.....	571	16	.....	.....	1,400	.....	.....	"	.....	.....	.....	.....	.....	.....	"	00	no	"	yes	"	"	14	"	.....	.....
Mine laborer.....	572	14	.....	.....	no	.....	.....	"	.....	.....	.....	.....	4 00	.....	"	00	no	"	no	"	"	13	"	.....	.....
".....	573	14	.....	.....	.....	.....	.....	"	.....	.....	.....	.....	4 00	.....	"	00	"	"	"	"	"	12	"	.....	.....
".....	574	14	.....	.....	8	.....	.....	"	.....	.....	.....	.....	.....	.....	"	00	"	"	"	"	"	14	"	.....	.....
".....	575	14	.....	.....	.....	.....	.....	"	.....	.....	.....	.....	4 00	.....	"	00	"	"	"	"	"	12	"	.....	.....
".....	576	14	.....	.....	50	.....	.....	"	.....	.....	.....	.....	.....	.....	"	00	"	"	"	"	"	11	"	.....	.....
Laborer.....	577	10	.....	.....	no	.....	.....	"	.....	.....	.....	.....	.....	.....	"	00	yes	"	"	"	"	12	"	.....	.....
".....	578	11	.....	.....	20	.....	.....	"	.....	.....	.....	.....	.....	.....	"	00	no	"	"	"	"	12	"	.....	.....
".....	579	12	.....	.....	.....	.....	.....	"	.....	.....	.....	.....	.....	.....	"	00	"	"	"	"	"	17	"	.....	.....

TABLE No. 7.—Continued.

Occupation.	Line number.	Age.	Nativity.	Nativity of parents.	How long in U. S., if foreign born.—(Years.)	Married or single.	How many children in family.	How many attend school.	How many depend on you for support.	How many years at present occupation.	How long with present employer.—(Years.)	Number of months employed during year.	How many hours for a day's work.	Wages paid.	Annual earnings.	Are you paid cash or trade.	How often are you paid.	Amount saved during the year.	How do wages compare with former years in this country.	What occupation did you follow in the old country.	Wages received in the old country.
Poland.....	1				4	m	0	4	1	1	10K	10	10	45 00 pr m	848 75	0	m	400	same	laborer	\$11 70 per mo
".....	2				14	s	2	2	3	1	11K	11	10	62 00	572 00	0	m	180	less	carpenter	35 40 "
".....	3				6	s	2	2	1	1	11K	11	10	62 00	572 00	0	m	180	same	"	28 40 "
France.....	4				20	s	1	1	1	1	12	12	10	55 00	680 00	0	m	400	better	"	28 40 "
Germany.....	5					m	1	1	1	1	12	12	10	60 00	720 00	0	m	300	"	"	
England.....	6					m	1	1	1	1	12	12	10	45 00	540 00	0	m	300	not answe'd	"	
".....	7					m	1	1	1	1	12	12	10	40 00	480 00	0	m	400	better	blacksmith	20 00 per mo
".....	8					m	1	1	1	1	12	12	10	55 00	720 00	0	m	400	same	"	
Germany.....	9				20	m	2	2	4	20	20	12	10	60 00	720 00	0	m	300	better	stone mason	17 00 per mo
".....	10				30	m	1	1	1	30	30	12	10	60 00	720 00	0	m	300	same	"	
Ireland.....	11					s	1	1	1	8	8	12	10	35 00	420 00	0	m	400	better	"	
".....	12					m	1	1	1	8	8	12	10	35 00	420 00	0	m	400	not answe'd	"	
England.....	13				20	m	4	4	4	12	12	12	10	60 00	720 00	0	m	250	same	miner	15 00 per mo
Poland.....	14				2	s	4	4	4	8	8	11K	10	45 00	472 00	0	m	100	not answe'd	laborer	10 40 "
".....	15				20	m	8	8	4	8	8	11K	8	70 00	846 00	0	m	250	same	carpenter	24 50 "
".....	16				13	m	4	4	1	8	8	11K	10	45 00	496 00	0	m	90	less	laborer	10 40 "
".....	17				4	m	6	4	1	12K	12K	12	10	45 00	540 00	0	m	250	same	"	15 60 "
Canada.....	18				20	m	5	2	4	12	12	12	10	47 00	564 00	0	m	400	not answe'd	"	
".....	19					m	7	2	8	7	10	12	10	47 00	564 00	0	m	300	same	"	
Ireland.....	20				18	m	8	1	1	17	17	13	10	65 00	680 00	0	m	300	same	brakeman	20 00 per mo
".....	21				15	m	8	1	2	15	15	13	10	67 00	684 00	0	m	300	"	farmer	18 00 "
Austria.....	22				3	m	2	3	4	3	3	12	8	46 00	560 00	0	m	125	same	miner	15 00 "
England.....	23				25	m	2	3	1	2	15	13	10	65 00	780 00	0	m	400	"	"	
Ireland.....	24					s	2	3	1	2	8	13	10	38 00	384 00	0	m	400	better	"	
".....	25					s	3	3	3	8	8	12	10	38 00	384 00	0	m	400	"	"	
Germany.....	26					s	1	1	1	1	1	13	10	38 00	384 00	0	m	400	"	"	
France.....	27				26	m	7	4	7	1	13	13	10	100 00	1,200 00	0	m	300	"	"	
Austria.....	28				2	m	1	1	1	1	1	12	8	70 00	840 00	0	m	400	"	farmer	15 00 per mo
Germany.....	29				6	m	1	1	1	1	1	12	8	68 00	688 00	0	m	400	better	"	15 00

"	659 30	Austria	Austria	4	8	1	1	1	4	4	12	8	53 00	"	635 00	m	225	same	"	18 00	"
"	659 31	"	"	1	m	1	1	1	1	1	1	8	53 00	"	53 00	m	200	same	"	18 00	"
"	660 22	"	"	1	m	1	1	1	1	1	1	8	53 00	"	53 00	m	200	same	"	18 00	himself
"	661 48	"	"	2	m	2	2	2	2	2	12	8	53 00	"	53 00	m	150	same	"	18 00	per mo
"	662 26	"	"	2	m	2	2	2	2	2	12	8	53 00	"	53 00	m	225	"	"	18 00	"
"	663 25	"	"	2	s	2	2	2	2	2	12	8	53 00	"	53 00	m	225	"	"	18 00	"
Laborer	661 23	"	"	3	s	3	3	3	3	3	12	8	39 00	"	78 00	m	125	same	"	18 00	"
"	665 29	U. S.	Germany	---	m	---	---	---	1	1	12	10	39 00	"	408 00	m	---	same	---	---	---
"	666 14	"	U. S.	---	s	---	---	---	6	6	6	10	14 00	"	84 00	m	---	same	---	---	---
"	667 19	"	Germany	---	s	---	---	---	6	6	12	10	39 00	"	408 00	m	---	same	---	---	---
"	668 51	Germany	"	24	m	9	8	3	3	7	12	10	45 00	"	540 00	m	500	"	soldier	not ans'd	---
"	669 21	England	England	2	s	---	---	1	1	1	12	10	47 00	"	544 00	m	200	"	fisherman	not ans'd	---
"	670 30	Finland	Finland	17	s	---	---	17	17	17	12	10	40 00	"	480 00	m	150	"	miner	15 00 per mo	---
"	671 40	Ireland	Ireland	20	m	7	3	7	15	15	12	10	39 00	"	408 00	m	---	less	---	---	---
"	672 17	"	"	---	s	---	---	2	2	2	2 w	10	26 00	"	17 50	m	---	---	---	---	---
"	673 30	"	"	15	s	---	---	---	6	6	12	10	39 00	"	408 00	m	---	same	---	---	---
Blacksmith	674 39	England	England	18	m	6	4	7	22	15	12	10	69 00	"	828 00	m	175	"	blacksmith	20 00 per mo	---
"	675 23	"	"	12	s	---	---	1	5	5	12	10	45 00	"	540 00	m	200	"	---	---	---
"	676 29	"	"	8	m	1	---	2	2	2	12	10	45 00	"	540 00	m	125	"	miner	15 00 per mo	---
"	677 18	U. S.	Ireland	---	s	---	---	---	1	1	12	10	45 00	"	540 00	m	---	not ans'w'd	---	---	---
Superintendent	678 54	"	U. S.	---	m	---	---	1	14	14	12	10	100 00	"	1,200 00	m	500	same	miner	15 00 per mo	---
Mining Capt.	679 40	Scotland	Scotland	18	m	6	6	7	26	16	12	10	100 00	"	1,200 00	m	200	"	---	20 00	---
"	680 41	England	England	35	m	9	---	5	9	9	12	10	84 00	"	1,008 00	m	100	better	"	20 00	---
"	681 24	"	"	5	s	2	---	3	17	5	10	10	55 00	"	550 00	m	200	same	"	15 00	---
"	682 39	"	"	9	m	1	---	2	25	6	12	10	55 00	"	600 00	m	150	"	"	15 00	---
"	683 19	"	"	12	s	---	---	1	5	15	12	10	48 00	"	576 00	m	275	"	---	---	---
"	684 32	U. S.	"	---	m	6	4	7	7	16	12	10	55 00	"	600 00	m	150	"	---	---	---
"	685 22	"	"	---	s	---	---	---	7	7	12	10	48 00	"	576 00	m	200	"	---	---	---
"	686 40	"	U. S.	---	m	4	1	5	16	8	12	10	48 00	"	576 00	m	150	"	---	---	---
"	687 58	Ireland	Ireland	25	m	5	---	1	40	23	12	10	60 00	"	720 00	m	300	less	miner	15 00 per mo	---
"	688 40	"	"	24	m	6	2	7	24	18	6 1/2	10	48 00	"	312 00	m	---	not ans'w'd	---	---	---
"	689 35	"	"	12	m	4	2	4	23	23	12	10	55 00	"	600 00	m	150	same	farmer	15 00 per mo	---
"	690 19	U. S.	Germany	---	s	---	---	---	3	3	12	10	45 00	"	540 00	m	125	less	---	---	---
"	691 43	"	"	---	m	5	4	6	26	3	12	10	48 00	"	576 00	m	200	same	---	---	---
"	692 22	"	"	---	s	---	---	---	8	8	12	10	55 00	"	600 00	m	---	---	---	---	---
"	693 39	Sweden	Sweden	16	m	4	2	5	16	16	12	10	55 00	"	600 00	m	100	"	laborer	20 00 per mo	---
Boos	694 40	Canada	Canada	10	m	---	---	1	10	10	12	10	40 00	"	480 00	m	300	"	farming	20 00	---
Laborer	695 20	"	"	1	s	---	---	---	1	1	12	10	39 00	"	408 00	m	---	not ans'w'd	"	+	---
"	696 22	"	"	3	s	---	---	---	3	3	12	10	45 00	"	540 00	m	175	"	not ans'w'd	+	---
"	697 28	"	"	8	s	---	---	---	1	1	12	10	45 00	"	540 00	m	125	"	not ans'w'd	+	---
"	698 17	U. S.	England	---	s	---	---	6	1	1	12	10	28 00	"	312 00	m	---	"	---	---	---
"	699 40	England	"	---	m	6	1	5	21	20	12	10	53 00	"	636 00	m	75	same	mining	15 00 per mo	---
"	700 3	U. S.	U. S.	---	s	---	---	---	3	3	12	10	39 00	"	408 00	m	100	"	---	---	---
"	701 19	"	Germany	---	s	---	---	---	8	2	12	10	38 00	"	466 00	m	175	"	---	---	---
Fireman	702 27	"	U. S.	---	m	---	---	1	6	7	11 1/2	12	56 00	"	636 00	m	100	"	---	---	---

* Give wages to father.

+ Worked for father.

TABLE No. 7.—Continued.

Occupation.	Line number.	How many hours for a day's work in the old country.	Amount of money at interest or in the bank.	If foreign born, how much money did you have on arrival in U. S.	Do you own your home. If so, its value.	If mortgaged, amount of mortgage.	Rate of interest.	Are you as well off as five years ago.	Loss of time.			If renting home, monthly rental.	If boarding, cost per week, including room.	Life insurance, how much.	Do you belong to a benevolent society.	Weekly benefit in case of sickness or accident.	Have you a sewing machine.	Have you a piano.	Have you an organ.	Do you take a newspaper.			Age began work.	State of health then.	State of health now.	Amount of relief rendered friends in the old country.	Amount of money furnished to friends for passage to U. S.
									From sickness.—(Days.)	Inability to obtain work.—(Days.)	Causes not stated.—(Days.)									Daily.	Weekly.	Monthly.					
Trammer.....	625	12	\$350	\$40	no			b't'r	18	7	14	\$4 00	\$5 00	\$1,000	yes	\$3 50	yes	no	no	no	yes	no	10	good	good	\$52	\$45
Carpenter.....	626	12		48	\$800			yes	6						"	50	no	"	"	"	"	"	10	"	"		80
".....	627	10	350	60	no			b't'r	21	5			5 00		"	25	yes	"	"	"	"	"	14	"	"	35	
Engineer.....	628	10		27				yes	13		5		4 00		"	00	no	"	"	"	"	16	"	"			
".....	629				"										"	00	yes	"	yes	no	yes	16	"	"			
".....	630				"			no				4 00			"	00	"	"	"	"	"	14	"	"			
Drill boy.....	631				"			yes							"	00	no	"	"	"	"	14	"	"			
Blacksmith.....	632				"										"	00	"	"	"	"	"	16	"	"			
".....	633	10	+	40	"			yes				4 00			"	00	yes	"	"	"	"	14	"	"			
Surface boss.....	634				"			"				3 00		1,000	"	00	"	"	yes	"	yes	16	"	"			
Stone mason.....	635	10	+		"			"				4 00			"	00	"	"	yes	no	"	15	"	"			
Machinist.....	636				"			"					4 00	1,000	"	00	no	"	no	"	"	18	"	"			
Car filler.....	637				"			"					4 00		"	00	yes	"	yes	"	"	16	"	"			
Mine clerk.....	638				"			"				4 00		2,000	"	00	yes	"	yes	"	"	16	"	"			
".....	639				"			"							"	00	"	"	"	"	"	16	"	"			
Copper dresser.....	640	8	1,800	45	"			"				4 00			"	00	"	"	"	"	"	16	"	"			
Oiler.....	641	18		27	"			b't'r		12	7		4 50		"	25	no	"	no	"	"	12	"	"			
Tram boss.....	642	10	2,100		"				6			6 00			"	50	"	"	yes	"	"	14	"	"		88	
Rockhouse man.....	643	18	1,100	43	"			yes	12		14	3 00			"	00	yes	"	no	"	"	10	"	"		75	
Timberman.....	644	12	450	17	"			yes	19			4 00			"	25	"	"	"	"	"	12	"	"			
Teamster.....	645		+		"										"	00	"	"	"	"	"	20	"	"			
".....	646		+		"			"							"	00	"	"	"	yes	"		"	"			
Supply clerk.....	647		+		"			"				3 00			"	00	no	"	"	"	yes	20	"	"			
Brakeman.....	648	8		75	"			"				3 00			"	00	"	"	"	"	"	16	"	"			
Timberman.....	649		+		"			"					4 00		"	00	"	"	"	"	"	10	"	"		20	
".....	650		+		"			"				3 00			"	00	yes	"	yes	no	yes	12	"	"			
".....	651		+		"			"							"	00	"	"	no	"	"	14	"	"			
Drill boy.....	652				"							3 00			"	00	no	"	"	"	"	14	"	"			
".....	653				"										"	00	"	"	"	"	"	16	"	"			
".....	654				"										"	00	"	"	"	"	"	16	"	"			
Surface boss.....	655		+	50	"			yes				12 00			"	00	yes	"	yes	"	no	24	"	"			
Mason.....	656		+	12	"			"					4 00		"	00	no	"	"	"	"	9	"	"		450	
Trammer.....	657		+		"			"				3 00			"	00	"	yes	"	"	"	12	"	"			

LABOR AND INDUSTRIAL STATISTICS.

TABLE NO. 7.—Continued.

Occupation.	Line number.	Age.	Nativity.	Nativity of parents.	How long in U. S. (if foreign born.—(Years.)	Married or single.	How many children in family.	How many attend school.	How many depend on you for support.	How many years at present occupation.	How long with present employer.—(Years.)	Number of months employed during year.	How many hours for a day's work.	Wages paid.	Annual earnings.	Are you paid cash or trade.	How often are you paid.	Amount saved during the year.	How do wages compare with former years in this country.	What occupation did you follow in the old country.	Wages received in the old country.
Fireman.	703	33	England	England	5	m	2	—	8	2	1 yr	12	10	\$56 00	\$672 00	c	m	\$175	less	blacksmith farming	\$12 00 per mo
"	704	30	Canada	Canada	2	s	—	—	—	—	2 mo	2	10	56 00	112 00	c	m	—	same	"	13 00 "
Carpenter.	705	42	"	"	34	m	7	8	8	1	1 yr	6 1/2	10	53 00	844 50	c	m	—	not ans'w'd	"	—
"	706	26	"	"	6	m	1	—	2	6	2 w	12	10	58 00	696 00	c	m	200	same	carpenter	26 00 per mo
"	707	52	Germany	Germany	40	m	5	1	4	25	6 yrs	12	10	54 00	643 00	c	m	—	not ans'w'd	"	—
"	708	31	U. S.	U. S.	—	m	2	2	8	16	16	12	10	52 00	624 00	c	m	100	same	"	—
Miner	709	22	England	England	13	s	—	—	—	8	"	12	10	43 00	576 00	c	m	150	not ans'w'd	"	—
"	710	40	"	"	8	m	3	2	4	14	"	12	10	43 00	576 00	c	m	—	"	mining	15 00 per mo
"	711	37	"	"	10	m	3	1	4	20	"	10	10	50 00	500 00	c	m	125	"	"	15 00 "
"	712	34	"	"	11	m	—	—	1	20	4	12	10	60 00	720 00	c	m	350	"	"	15 00 "
"	713	40	"	"	10	m	3	1	4	27	10	12	19	48 00	576 00	c	m	—	same	"	15 00 "
"	714	36	"	"	15	m	2	1	3	—	14	12	10	50 00	600 00	c	m	—	"	engineer	17 50 "
"	715	37	"	"	12	m	4	1	5	12	1	12	10	55 00	660 00	c	m	125	not ans'w'd	mining	15 00 "
"	716	40	"	"	20	m	3	1	4	20	8	12	10	48 00	576 00	c	m	125	less	"	15 00 "
"	717	44	"	"	14	m	3	2	4	29	8	12	10	48 00	576 00	c	m	—	"	"	20 00 "
"	718	28	"	"	6	m	5	2	6	13	6	10	10	60 00	600 00	c	m	120	"	"	20 00 "
"	719	40	Ireland	Ireland	—	m	4	3	5	20	19	12	10	48 00	576 00	c	m	—	"	"	15 00 "
"	720	35	"	"	15	m	7	4	8	15	14	10	10	60 00	600 00	c	m	—	same	"	not answered
"	721	26	U. S.	England	—	m	1	—	2	1	1	12	10	48 00	576 00	c	m	100	"	"	—
"	722	19	"	"	—	s	—	—	—	4	4	12	10	50 00	600 00	c	m	200	"	"	—
Engineer.	723	43	Germany	Germany	23	m	2	2	3	23	20	12	10	85 00	1,020 00	c	m	500	less	clerk	not answered
"	724	50	"	"	26	m	11	4	10	2	2	12	10	47 00	564 00	c	m	—	lower	not ans'w'd	"
"	725	34	England	England	14	m	2	—	3	1	1	12	10	65 00	780 00	c	m	350	same	mining	16 00 per mo
"	726	38	"	"	14	m	3	1	4	8	"	12	10	47 00	564 00	c	m	75	"	farmer	don't know
"	727	38	"	"	19	m	1	1	2	2	2	12	10	47 00	564 00	c	m	125	not ans'w'd	mining	15 00 per mo
"	728	31	Canada	Canada	14	m	4	2	5	3	3	11 1/2	10	50 00	587 50	c	m	150	same	farming	16 00 "
"	729	27	Sweden	Sweden	4	m	—	—	1	1	1	12	10	85 00	1,020 00	c	m	—	not ans'w'd	mason	17 00 "
"	730	27	U. S.	Germany	—	m	2	—	3	1	1	12	10	70 00	840 00	c	m	200	same	"	—
Drill boy	731	15	"	Ireland	—	s	—	—	2	2	2	12	10	82 00	884 00	c	m	—	not ans'w'd	"	—
R. R. boss	732	50	Canada	Canada	30	m	—	—	1	10	"	12	10	55 00	660 00	c	m	—	"	farming	18 00 per mo
Teamster.	733	39	"	"	23	m	4	—	5	8	"	12	10	47 00	564 00	c	m	—	same	not ans'w'd	not answered
"	734	23	England	England	13	s	—	—	—	2	2	12	10	47 00	564 00	c	m	160	"	"	—
Brakeman.	735	28	Canada	Canada	19	s	—	—	—	2	2	12	10	50 00	600 00	c	m	200	"	"	—

Blacksmith	736 55	Ireland	36	m	9	6	7	30	1	"	12	10	63 00	"	756 00	c	m	126	"	blacksmith	12 00 per mo
"	737 37	England	80	m	3	1	4	6	6	"	12	10	50 00	"	600 00	c	m	300	"	"	"
"	738 32	U. S.	---	m	8	---	4	13	18	"	12	10	70 00	"	840 00	c	m	---	not answ'd	"	"
"	739 21	"	---	s	---	---	---	1	1	"	12	10	45 00	"	540 00	c	m	---	same	"	"
"	740 22	Canada	---	s	---	---	---	8	8	"	12	10	45 00	"	540 00	c	m	---	"	"	"
Machinist	741 30	England	9	m	2	---	3	10	1	"	12	10	65 00	"	780 00	c	m	250	"	machinist	20 00 per mo
"	742 26	U. S.	---	m	---	---	1	1	1	"	12	10	40 00	"	480 00	c	m	---	"	"	"
"	743 45	Canada	22	m	7	1	7	10	10	"	12	10	40 00	"	480 00	c	m	---	"	laborer	12 00 per mo
Laborer	744 43	England	12	m	4	3	5	1	1	"	11	10	50 00	"	550 00	c	m	---	less	miner	20 00 "
"	745 50	"	26	m	7	2	8	5	5	"	11	10	40 00	"	440 00	c	m	---	smaller	"	20 00 "
"	746 23	U. S.	---	s	---	---	---	2	2	"	12	10	39 00	"	468 00	c	m	---	not answ'd	"	"
"	747	Germany	19	m	2	1	3	19	19	"	12	10	40 00	"	480 00	c	m	---	"	"	"
"	748 21	U. S.	---	m	---	---	1	5	5	"	12	10	40 00	"	480 00	c	m	---	"	"	"
"	749 19	"	---	s	---	---	---	5	5	"	12	10	46 00	"	540 00	c	m	---	"	"	"
"	750 55	Ireland	22	m	---	---	1	22	22	"	12	10	40 00	"	480 00	c	m	20	less	miner	20 00 per mo
"	751 38	Canada	8	m	8	1	4	3	3	"	12	10	48 00	"	576 00	c	m	+	not answ'd	farmer	not answered
Engineer	752 19	"	18	s	---	---	---	5	5	"	12	10	50 00	"	600 00	c	m	---	same	"	"
"	753 46	France	20	m	6	4	7	8	8	"	12	10	54 00	"	648 00	c	m	---	not answ'd	farmer	not answered
"	754	England	30	m	3	3	4	14	14	"	12	10	57 00	"	684 00	c	m	180	"	engineer	15 00 per mo
"	755 36	"	13	m	2	---	8	2	2	"	11 1/2	8	48 00	"	540 00	c	m	+	"	miner	"
"	756 30	"	12	m	2	1	3	3	3	"	12	10	50 00	"	600 00	c	m	---	same	clerk	10 00 "
"	757 32	U. S.	---	m	5	3	6	14	14	"	12	10	60 00	"	720 00	c	m	+	not answ'd	"	"
"	758 35	Ireland	19	m	5	2	6	19	19	"	12	10	60 00	"	720 00	c	m	---	same	"	"
Teamster	759 27	Canada	12	m	3	---	4	---	---	mo	12	10	47 00	"	564 00	c	m	---	"	not answ'd	not answered
"	760 53	England	34	m	3	1	4	---	4	"	12	10	47 00	"	564 00	c	m	+	not answ'd	miner	15 00 per mo
"	761 40	Scotland	16	m	5	2	6	8	8	"	12	10	50 00	"	600 00	c	m	---	"	fireman	don't know
Carpenter	762 35	"	2	m	7	4	8	2	2	"	9	10	54 00	"	488 00	c	m	---	same	not answ'd	not answered
"	763 47	Germany	22	m	9	4	7	3	3	"	12	10	55 00	"	660 00	c	m	+	"	miner	don't know
"	764 25	England	8	s	---	---	---	2	2	"	12	10	52 00	"	624 00	c	m	---	not answ'd	"	"
"	765 55	"	50	m	7	---	2	---	20	"	12	10	65 00	"	780 00	c	m	---	same	"	"
Miner	766 18	U. S.	---	s	---	---	---	3	3	"	12	10	48 00	"	516 60	c	m	---	not answ'd	"	"
"	767 17	"	---	s	---	---	---	1	1	"	12	8	35 00	"	420 06	c	m	---	"	"	"
"	768 19	England	---	s	---	---	---	4	4	"	12	10	35 00	"	420 00	c	m	---	not answ'd	"	"
"	769 50	Ireland	19	m	7	2	6	16	16	"	12	10	40 00	"	480 00	c	m	---	"	miner	15 00 per mo
"	770 30	"	12	m	5	2	6	5	5	"	12	10	50 00	"	600 00	c	m	---	same	laborer	not answered
"	771 35	"	16	m	5	---	6	16	16	"	12	10	48 00	"	576 00	c	m	---	not answ'd	miner	"
"	772 44	England	16	m	2	1	3	14	14	"	12	10	48 00	"	576 00	c	m	+	"	"	15 00 per mo
"	773 44	"	2	m	4	2	5	14	14	"	12	10	45 00	"	540 00	c	m	---	"	"	15 00 "
"	774 42	"	23	m	3	3	4	17	17	"	12	10	40 00	"	480 00	c	m	---	same	"	15 00 "
"	775 42	"	18	m	7	4	5	12	12	"	12	10	60 00	"	720 00	c	m	+	less	"	20 00 "
"	776 44	"	18	m	7	8	7	16	16	"	10	10	50 00	"	500 00	c	m	---	smaller	"	not answered
"	777 46	"	17	m	---	---	1	17	17	"	10	10	48 00	"	480 00	c	m	---	not answ'd	"	20 00 per mo
"	778 23	"	17	m	---	---	---	6	6	"	12	10	48 00	"	576 00	c	m	---	same	"	"
"	779 38	"	9	m	8	2	4	8	8	"	12	10	60 00	"	720 00	c	m	---	"	mining	20 00 per mo
"	780 45	"	22	m	7	5	8	3	3	"	12	10	48 00	"	576 00	c	m	---	"	"	15 00 "

† Refused.

TABLE NO. 7.—Continued.

Occupation.	Line number.	How many hours for a day's work in the old country.	Amount of money at interest or in the bank.	If foreign born, how much money did you have on arrival in U. S.	Do you own your home. If so, its value.	If mortgaged, amount of mortgage.	Rate of interest.	Are you as well off as five years ago.	Loss of time.			If renting home, monthly rental.	If boarding, cost per week, including room.	Life insurance, how much.	Do you belong to a benefit society.	Weekly benefit in case of sickness or accident.	Have you a sewing machine.	Have you a piano.	Have you an organ.	Do you take a newspaper.			Age began work.	State of health then.	State of health now.	Amount of relief rendered friends in the old country.	Amount of money furnished to friends for passage to U. S.
									From sickness.—(Days.)	Inability to obtain work.—(Days.)	(Causes not stated.—(Days.)									Daily.	Weekly.	Monthly.					
Fireman.....	703	8	+	\$27	no			yes			\$6 50	\$4 50			yes	\$6 00	yes	no	no	no	no	no	9	good	good	\$10	
".....	704	12	+	25	"			"	144		7 00				"	6 00	no	"	"	"	"	15	"	"			
Carpenter.....	705	10	+		"			"			6 50				"	6 00	no	"	"	"	"	15	"	"			
".....	706		+		"			"			7 00				"	6 00	yes	yes	"	"	"		"	"			
".....	707		+		"			"			4 00	4 50			"	6 00	"	"	no	"	"	15	"	"			
Miner.....	708		+		"			"			7 00				"	6 00	no	"	"	"	"	14	"	"			
".....	709				"			"			7 00				"	6 00	yes	"	"	"	"	13	"	"			
".....	710	8	\$24		"			"	52		7 00				"	6 00	"	"	"	"	"	15	"	"			
".....	711		1,250	175	"			"			7 00				"	6 00	"	"	yes	"	"	14	"	"			
".....	712				"			"							"	6 00	"	"	"	"	"	15	"	"			
".....	713	8	+	18	"			"			7 00		\$1,000		"	6 00	"	"	no	"	"	8	"	"			
".....	714	8	+		\$300			"			6 00		1,000		"	6 00	"	"	yes	"	"	12	"	"			
".....	715	8	1,600	25	no			"			8 00				"	6 00	"	"	no	"	"	14	"	"			
".....	716	8			"			"							"	6 00	"	"	yes	"	"	16	"	"			
".....	717	8			"			"							"	6 00	"	"	"	"	"		"	"			
".....	718	8	+	25	"			"	52		5 00				"	6 00	"	"	no	"	"	15	"	"			
".....	719	8	+	25	"			"			4 00				"	6 00	no	"	"	"	"	20	"	"			
".....	720	8	+		1,200			"	52		7 00		1,000		"	6 00	"	"	"	"	"	15	"	"			
".....	721		+		no			"							"	6 00	"	"	"	"	"	12	"	"			
".....	722				900			yes							"	6 00	yes	yes	"	"	"	15	"	"			
Engineer.....	723	12	+	25											"	6 00	"	"	yes	"	"	20	"	"			
".....	724		+		1,250			"					1,000		"	6 00	"	"	"	"	"	16	"	"			
".....	725	8	750	25	1,400			"							"	6 00	"	"	"	"	"	15	"	"			
".....	726	10	+		700			"							"	6 00	"	"	no	"	"	9	"	"			
".....	727	8		28	no			"			7 00				"	6 00	"	"	"	"	"	12	"	"			
".....	728				1,200			"	6				2,000		"	6 00	"	"	yes	"	"	14	"	"			
".....	729	10		19	no			"					1,000		"	6 00	"	"	no	"	"		"	"			
".....	730		+		900			"			4 00				"	6 00	"	"	"	"	"	15	"	"			
Drill boy.....	731				no			yes							"	6 00	"	"	"	"	"	13	"	"			
R. R. boss.....	732			20	"							10 00			"	6 00	no	"	"	"	"	14	"	"			
Teamster.....	733		+		"			"			7 00				"	6 00	"	"	"	"	"	16	"	"			
".....	734		+		"			"				4 50			"	6 00	"	"	"	"	"	15	"	"			
Brakeman.....	735		+		"			"				4 50			"	6 00	"	"	"	"	"	11	"	"			

TABLE No. 7.—Continued.

Occupation.	Line number.	Age.	Nativity.	Nativity of parents.	How long in U. S., if foreign born.—(Years.)	Married or single.	How many children in family.	How many attend school.	How many depend on you for support.	How many years at present occupation.	How long with present employer.—(Years.)	Number of months employed during year.	How many hours for a day's work.	Wages paid.	Annual earnings.	Are you paid cash or trade.	How often are you paid.	Amount saved during the year.	How do wages compare with former years in this country.	What occupation did you follow in the old country.	Wages received in the old country.
Miner	781	35	England	England	20	m	8	2	4	3	8	11	10	\$48 00 pr m	\$694 00	c	m	\$108	not ans'd	not ans'd	not ans'd
"	782	32	"	"	14	m	9	3	6	13	13	12	10	48 00	576 00	c	m	*	"	miner	\$15 00 per mo
"	783	51	"	"	19	m	9	2	8	18	18	13	10	50 00	600 00	c	m	*	"	"	20 00
"	784	39	"	"	14	m	9	2	8	14	14	13	10	50 00	600 00	c	m	*	"	"	17 00
"	785	34	"	"	14	m	9	2	8	9	9	12	10	60 00	720 00	c	m	*	same	"	"
"	786	30	"	"	7	m	9	3	6	2	2	13	10	47 00	564 00	c	m	*	"	"	15 00
"	787	40	"	"	20	m	9	4	6	9	9	12	10	50 00	600 00	c	m	*	"	"	15 00
"	788	30	"	"	9	m	4	2	5	2	2	11	10	50 00	550 00	c	m	*	"	"	15 00
"	789	51	"	"	25	m	1	1	5	5	6	10	10	48 00	516 00	c	m	*	"	"	20 00
"	790	52	"	"	20	m	8	2	5	8	8	12	10	50 00	600 00	c	m	*	smaller	"	15 00
"	791	52	"	"	18	m	2	3	1	17	17	12	10	50 00	600 00	c	m	*	same	"	20 00
Machinist	792	45	Germany	Germany	35	m	4	3	5	17	17	12	10	50 00	600 00	c	m	*	not ans'd	not ans'd	not ans'd
Trammer	793	40	"	"	18	m	3	3	4	9	9	11	8	52 00	585 00	c	m	*	smaller	millor	not ans'd
Miller	794	38	Ireland	Ireland	15	m	2	3	3	13	8	12	10	48 00	576 00	c	m	*	not ans'd	miner	20 00 per mo
"	795	17	U. S.	England	---	s	---	---	---	1	1	12	10	27 00	324 00	c	m	---	---	---	---
"	796	41	Norway	Norway	16	m	7	4	8	15	15	12	10	48 00	576 00	c	m	---	same	miner	not ans'd
"	797	36	England	England	18	m	4	3	6	19	11	12	10	48 00	576 00	c	m	---	not ans'd	not ans'd	not ans'd
"	798	45	"	"	20	m	3	2	3	20	20	13	10	48 00	576 00	c	m	126	same	miner	10 00 per mo
"	799	49	"	"	25	m	9	3	5	25	9	12	10	48 00	576 00	c	m	---	less	"	15 00
"	800	45	"	"	20	m	9	3	6	20	15	10	10	48 00	480 00	c	m	---	same	"	16 00
"	801	44	Sweden	Sweden	20	m	8	1	4	15	15	12	10	53 00	636 00	c	m	---	not ans'd	"	10 00
"	802	59	"	"	26	m	3	3	4	17	3	12	10	48 00	576 00	c	m	---	less	farmer	not ans'd
"	803	20	"	"	7	m	4	3	5	4	3	12	10	45 00	576 00	c	m	100	same	not ans'd	not ans'd
"	804	23	"	"	7	m	1	1	2	7	7	10	10	48 00	480 00	c	m	120	not ans'd	miner	10 00 per mo
"	805	28	"	"	---	s	3	3	4	8	3	12	10	48 00	576 00	c	m	---	same	"	8 00
"	806	38	"	"	15	m	9	3	10	25	10	12	10	48 00	576 00	c	m	---	"	"	not ans'd
"	807	45	"	"	16	m	2	1	3	16	16	13	10	48 00	576 00	c	m	---	"	"	not ans'd
"	808	40	"	"	4	m	8	1	4	15	10	12	10	48 00	576 00	c	m	---	not ans'd	"	15 00 per mo
"	809	25	"	"	2	s	---	---	---	2	2	12	10	48 00	576 00	c	m	---	"	not ans'd	not ans'd
"	810	26	"	"	16	s	6	3	7	15	15	12	10	48 00	576 00	c	m	---	same	farmer	don't know
"	811	20	"	"	6	s	---	---	---	10	6	12	10	50 00	600 00	c	m	---	"	miner	20 00 per mo
Machinist	812	34	England	England	11	m	1	1	2	2	2	12	10	47 00	564 00	c	m	150	"	molder	20 00 per mo
"	813	50	"	"	30	m	9	3	2	15	15	12	10	60 00	720 00	c	m	---	"	miner	15 00

Carpenter.	Canada	26	m	5	8	2	28	21	12	10	53	00	694	00	m	+	"	carpenter	not ans'd
Painter	Scotland	3	m	4	5	5	30	4	13	10	53	00	626	00	m	+	"	farmer	not ans'd
Mail boy	Canada	28	m	4	5	5	30	4	13	10	53	00	624	00	m	+	same	farmer	not ans'd
Timberman	Austria	15	s	8	8	8	3	8	11	10	36	00	398	75	m	+	not ans'd	miner	don't know
	"	3	s	8	8	8	3	8	13	10	45	00	540	00	m	+	not ans'd	farmer	don't know
Blast.	Sweden	18	m	6	4	7	3	8	12	10	60	00	720	00	m	+	not ans'd	miner	don't know
Laborer	Canada	2	s	4	8	7	1	1	12	10	35	00	420	00	m	+	not ans'd	farmer	don't know
"	"	4	s	8	8	7	1	1	12	10	35	00	420	00	m	+	less	teamster	don't know
"	"	9	m	7	8	7	1	1	12	10	35	00	456	00	m	+	not ans'd	farmer	not ans'd
"	"	9	s	8	8	7	1	1	12	10	35	00	52	00	m	+	not ans'd	not ans'd	not ans'd
"	"	22	m	6	8	7	5	5	13	10	40	00	490	00	m	+	not ans'd	farmer	not ans'd
"	"	20	m	4	8	4	15	15	11	10	40	00	440	00	m	+	not ans'd	not ans'd	not ans'd
"	U. S.	1	s	8	8	7	2	2	12	10	35	00	376	00	m	+	not ans'd	not ans'd	not ans'd
"	England	1	s	8	8	7	1	1	12	10	35	00	490	00	m	+	not ans'd	not ans'd	not ans'd
"	Austria	5	m	8	8	1	3	3	12	10	35	00	624	00	m	+	not ans'd	blacksmith	don't know
Blacksmith	Sweden	12	m	8	8	4	7	7	12	10	70	00	840	00	m	+	same	laborer	not ans'd
"	England	1	s	8	8	7	1	1	12	10	45	00	540	00	m	+	less	blacksmith	not ans'd
"	U. S.	8	s	8	8	7	1	1	12	10	35	00	600	00	m	+	not ans'd	blacksmith	not ans'd
"	Germany	20	m	8	1	4	9	9	11	10	30	00	345	00	m	+	not ans'd	blacksmith	not ans'd
"	England	24	m	4	8	4	23	24	13	10	60	00	720	00	m	+	same	blacksmith	not ans'd
Barn boss.	Germany	1	m	11	5	6	35	1	12	12	65	00	838	00	m	+	same	blacksmith	not ans'd
Timsmith.	Canada	18	m	8	8	4	5	5	13	10	55	00	800	00	m	+	not ans'd	farming	not ans'd
Engineer.	England	21	m	7	8	6	21	21	12	10	70	00	840	00	m	+	not ans'd	tinsmith	not ans'd
"	"	6	s	8	8	1	1	1	13	10	57	00	684	00	m	+	not ans'd	fireman	not ans'd
Teamster.	Germany	18	m	2	8	1	5	5	13	10	68	00	744	00	m	+	not ans'd	blacksmith	not ans'd
"	France	12	m	1	8	2	5	5	13	10	47	00	554	00	m	+	not ans'd	blacksmith	not ans'd
"	Canada	12	m	1	8	2	12	12	13	10	47	00	554	00	m	+	not ans'd	farming	not ans'd
Hostler.	Ireland	28	m	8	8	7	10	10	13	10	47	00	554	00	m	+	not ans'd	farming	not ans'd
"	Canada	14	s	8	2	7	2	2	13	10	40	00	490	00	m	+	not ans'd	carpenter	not ans'd
Flag man.	Ireland	1	s	8	2	7	1	1	13	10	40	00	490	00	m	+	not ans'd	carpenter	not ans'd
Carpenter.	Canada	14	s	8	2	7	1	1	13	10	40	00	490	00	m	+	not ans'd	carpenter	not ans'd
Blacksmith	"	1	s	8	2	7	1	1	13	10	40	00	490	00	m	+	not ans'd	carpenter	not ans'd
"	Germany	16	m	8	2	7	1	1	13	10	40	00	490	00	m	+	not ans'd	carpenter	not ans'd
Teamster.	Ireland	16	m	8	2	7	1	1	13	10	40	00	490	00	m	+	not ans'd	carpenter	not ans'd
"	Canada	15	m	8	2	7	1	1	13	10	40	00	490	00	m	+	not ans'd	carpenter	not ans'd
"	"	15	m	8	2	7	1	1	13	10	40	00	490	00	m	+	not ans'd	carpenter	not ans'd
Engineer.	"	14	m	8	2	7	1	1	13	10	40	00	490	00	m	+	not ans'd	carpenter	not ans'd
"	England	25	m	6	1	6	11	11	13	10	57	00	684	00	m	+	not ans'd	carpenter	not ans'd
"	Ireland	18	m	6	1	6	11	11	13	10	57	00	684	00	m	+	not ans'd	carpenter	not ans'd
Fireman.	Canada	16	m	6	1	6	11	11	13	10	57	00	684	00	m	+	not ans'd	carpenter	not ans'd

* Refused.

TABLE NO. 7.—Continued.

Occupation.	Line Number.	How many hours for a day's work in the old country.	Amount of money at interest or in the bank.	If foreign born, how much money did you have on arrival in U. S.	Do you own your home. If so, its value.	If mortgaged, amount of mortgage.	Rate of interest.	Are you as well off as five years ago.	Loss of time.			If renting home, monthly rental.	If boarding, cost per week, including room.	Life insurance, how much.	Do you belong to a benevolent society.	Weekly benefit in case of sickness or accident.	Have you a sewing machine.	Have you a piano.	Have you an organ.	Do you take a newspaper.			Age began work.	State of health then.	State of health now.	Amount of relief rendered friends in the old country.	Amount of money furnished to friends for passage to U. S.
									From sickness.—(Days.)	Inability to obtain work.—(Days.)	Causes not stated.—(Days.)									Daily.	Weekly.	Monthly.					
Miner.	781			+	no			yes	6		\$4 00				yes	\$5 00	yes	no	yes	no	no	9	good	good			
"	782				"			no			3 00				"	5 00	"	"	"	"	"	9	"	"			
"	783				"			yes			2 50				"	5 00	"	"	yes	no	"	10	"	"			
"	784				"			no			3 00				"	5 00	"	"	"	"	"	8	"	"			
"	785				"			yes			4 00				"	5 00	"	"	"	"	"		"	"			
"	786				"			"			2 50				"	5 00	"	"	yes	"	"	8	"	"			
"	787				"			"			3 00				"	5 00	"	"	"	"	"	9	"	"			
"	788				"			"			4 00				"	5 00	"	"	"	"	"	9	"	"			
"	789				"			"			5 00				"	5 00	"	"	no	"	"	10	"	"			
"	790				"			"			5 00				"	5 00	"	"	yes	"	"		"	"			
"	791				"			no			4 00				"	5 00	"	"	"	"	"	8	"	"			
Machinist.	792				"			yes	19		2 50				"	5 00	"	"	"	"	"	14	"	"			
Trammer	793				"			"			4 00				"	5 00	"	"	"	"	"	15	"	"			
Miller.	794				\$800			"							"	5 00	"	"	"	"	"	11	"	"			
"	795				no			"							"	5 00	no	"	"	"	"	16	"	"			
"	796				800			yes			4 00		\$1,000		"	5 00	yes	"	"	"	"	13	"	"			
"	797				no			"			3 00				"	5 00	"	"	yes	"	"	9	"	"			
"	798				400			"							"	5 00	"	"	"	"	"	15	"	"			
"	799				no			no		52					"	5 00	no	"	"	"	"	9	"	"			
"	800				400			yes							"	5 00	yes	"	yes	"	"	10	"	"			
"	801			\$25				"							"	5 00	"	"	"	"	"	13	"	"			
"	802				800			"							"	5 00	"	"	yes	"	"	11	"	"			
"	803			20	no			"							"	5 00	no	"	no	"	"	12	"	"			
"	804				500			"			8 50				"	5 00	yes	"	"	"	"	15	"	"			
"	805				no			"	52		6 00		1,000		"	5 00	"	"	"	"	"	13	"	"			
"	806				500			"					2,000		"	5 00	"	"	yes	"	"		"	"			
"	807				500			"							"	5 00	"	"	"	"	"		"	"			
"	808				no			"			4 00				"	5 00	"	"	no	"	"		"	"			
"	809				800			"				\$4 50			"	5 00	no	"	"	"	"	8	"	"			
"	810				"			"				4 50			"	5 00	yes	"	"	"	"	12	"	"			
"	811				no			"			3 00				"	5 00	no	"	"	"	"	15	"	"			
Machinist.	812				"			"						1,000	"	5 00	yes	"	"	"	"	13	"	"			
"	813				"			"							"	5 00	"	"	"	"	"	13	"	"			

[illegible]

Refused.

TABLE NO. 7.—Continued.

Occupation.	Line number.	Age.	Native.	Native of parents.	How long in U. S., if foreign born.	Sex.	Marital status.	Years in U. S.	How many hours for a day's work.	Wages paid.	Annual earnings.	Are you paid cash or trade.	How often are you paid.	Amount saved during the year.	How do wages compare with former years in this country.	What occupation did you follow in the old country.	Wages received in the old country.
Fireman	859	20	U. S.	Switzerland.	18	m	1	3 yrs	12	\$10.50 pr m	\$180.00	c	m		not ans'd	farmer	not answered
Laborer	860	21	U. S.	U. S.	26	m	1	2 yrs	12	\$10.00	\$40.00	c	m		same	blacksmith	not answered
"	861	21	Germany	Germany	21	m	4	15 yrs	12	\$10.40	\$52.00	c	m		better		
"	862	21	U. S.	"	21	m	1	2 yrs	10	\$10.40	\$40.00	c	m	\$50			
"	863	21	U. S.	"	21	m	1	1 yr	12	\$8.00	\$12.00	c	m		not ans'd		
"	864	21	"	"	21	m	1	3 yrs	12	\$10.00	\$60.00	c	m		not ans'd		
"	865	21	Germany	Germany	26	m	1	3 yrs	12	\$10.00	\$150.00	c	m		not ans'd		
"	866	21	U. S.	England	18	m	2	1 yr	12	\$10.00	\$12.00	c	m		not ans'd	molder	can't tell
"	867	21	England	"	18	m	2	3 yrs	12	\$10.00	\$480.00	c	m		less		
"	868	21	Canada	Canada	4	m	4	3 yrs	6	\$10.00	\$240.00	c	m		same	farmer	not answered
"	869	21	U. S.	U. S.	20	m	7	15 yrs	12	\$10.00	\$411.25	c	m		not ans'd		
"	870	21	England	England	20	m	8	2 yrs	12	\$10.00	\$360.00	c	m		lower	not ans'd	not answered
"	871	21	Finland	Finland	16	m	8	1 yr	12	\$10.00	\$444.00	c	m				
"	872	21	Ireland	Ireland	16	m	8	1 yr	12	\$10.00	\$312.00	c	m				
Miner	873	21	Scotland	Scotland	16	m	4	14 yrs	9	\$10.00	\$540.00	c	m	200	not ans'd	not ans'd	not answered
"	874	21	Australia	England	6	m	4	3 yrs	11½	\$10.00	\$402.50	c	m	+	"		
"	875	21	U. S.	"	14	m	4	6 yrs	13	\$10.00	\$600.00	c	m		"		
"	876	21	"	"	14	m	4	6 yrs	13	\$10.00	\$604.00	c	m		"		
"	877	21	"	"	14	m	4	6 yrs	13	\$10.00	\$604.00	c	m		"		
"	878	21	Canada	Norway	8	m	4	3 yrs	13	\$10.00	\$128.00	c	m		"		
"	879	21	Canada	Canada	8	m	4	3 yrs	13	\$10.00	\$480.00	c	m		"		
"	880	21	Ireland	Ireland	18	m	3	12 yrs	12	\$10.00	\$300.00	c	m	100	same		
"	881	21	"	"	17	m	3	7 yrs	6	\$10.00	\$240.00	c	m	100	"	miner	don't know
"	882	21	"	"	17	m	3	7 yrs	6	\$10.00	\$576.00	c	m	100	not so good		
"	883	21	"	"	17	m	3	7 yrs	6	\$10.00	\$576.00	c	m	100	same	miner	\$15.00 per mo
"	884	21	England	England	15	m	2	10 yrs	12	\$10.00	\$576.00	c	m	200	smaller	clerk	\$15.00
"	885	21	"	"	20	m	2	19 yrs	12	\$10.00	\$576.00	c	m				
"	886	21	"	"	16	m	3	4 yrs	12	\$10.00	\$480.00	c	m	+	lower	machinist	don't know
"	887	21	"	"	23	m	3	11 yrs	12	\$10.00	\$600.00	c	m		same	miner	not answered
"	888	21	"	"	19	m	3	16 yrs	12	\$10.00	\$576.00	c	m		less	"	\$15.00 per mo
"	889	21	"	"	22	m	3	10 yrs	12	\$10.00	\$600.00	c	m		smaller	"	\$15.00
"	890	21	"	"	24	m	3	20 yrs	12	\$10.00	\$600.00	c	m		don't know	"	\$15.00
"	891	21	"	"	18	m	3	3 yrs	12	\$10.00	\$720.00	c	m		not ans'd	"	\$15.00

Boiler ms	"	15	m	5	4	6	15	15	"	12	10	100	00	"	1,200	00	c	m	500	same	not answe'd	not answered
Oiler	"	20	m	10	10	8	17	3	"	12	10	40	00	"	480	00	c	m	200	less	mining	15 00 per mo
Dryman	"	18	m	10	10	8	17	6	"	12	10	40	00	"	480	00	c	m	200	same	pattern maker	20 00 "
Pattern m	"	18	m	10	10	8	17	6	"	12	10	40	00	"	480	00	c	m	200	"	"	"
Lander	"	18	m	10	10	8	17	6	"	12	10	40	00	"	480	00	c	m	200	"	"	"
Timberm	"	25	m	4	4	1	25	4	"	12	10	60	00	"	720	00	c	m	†	"	mining	15 00 per mo
Teamster	Canada	1	s	1	1	1	1	1	"	12	10	47	00	"	504	01	c	m	1	"	farming	not answered
Tramner	Austria	2	s	1	1	1	1	1	mo	1	8	53	00	"	63	00	c	m	1	"	"	"
Carpenter	Germany	1	m	8	8	4	1	1	yr	12	10	55	00	"	680	00	c	m	1	"	not answe'd	"
Mason	"	22	m	1	1	1	20	7	"	12	10	73	00	"	864	00	c	m	1	"	mason	don't know
Blafter	Ireland	20	m	8	8	4	2	3	"	12	10	60	00	"	720	00	c	m	200	better	"	"
Locomotive	U.S.	6	m	1	1	1	1	1	"	12	10	50	00	"	600	00	c	m	176	less	"	"
Brakeman	Scotland	20	m	1	1	1	1	1	"	12	10	57	00	"	624	00	c	m	1	not answe'd	farming	not answered
"	Canada	20	m	1	1	1	1	1	"	12	10	60	00	"	720	00	c	m	1	same	"	"
"	"	20	m	1	1	1	1	1	"	12	10	60	00	"	720	00	c	m	1	"	"	"
"	U.S.	1	s	1	1	1	1	1	"	12	10	60	00	"	720	00	c	m	1	"	"	"
Engineer	"	1	s	1	1	1	1	1	"	12	10	60	00	"	720	00	c	m	1	"	"	"
Blacksmith	Canada	15	s	1	1	1	1	1	"	12	10	60	00	"	684	00	c	m	100	less	"	"
"	"	1	s	1	1	1	1	1	"	12	10	60	00	"	540	00	c	m	1	"	"	"
"	Scotland	17	m	6	6	7	17	17	"	11 1/2	10	45	00	"	517	50	c	m	1	not answe'd	farming	not answered
"	Ireland	13	s	1	1	1	1	1	"	12	10	45	00	"	624	00	c	m	200	less	blacksmith	"
"	U.S.	13	s	1	1	1	1	1	"	12	10	45	00	"	540	00	c	m	1	same	"	"
"	"	13	s	1	1	1	1	1	"	12	10	45	00	"	606	00	c	m	1	"	"	"
"	England	20	m	2	2	3	2	2	"	12	10	60	00	"	720	00	c	m	1	"	"	"
"	Germany	9	m	1	1	1	1	1	"	12	10	60	00	"	720	00	c	m	150	less	not answe'd	not answered
"	Sweden	20	m	1	1	1	1	1	"	12	10	60	00	"	680	00	c	m	1	same	not answe'd	don't know
"	Canada	1	m	1	1	1	1	1	mo	12	10	60	00	"	720	00	c	m	1	"	farming	not answered
Machinist	"	1	m	1	1	1	1	1	mo	12	10	40	00	"	40	00	c	m	1	"	"	"
Laborer	"	8	m	2	2	3	8	8	yr	9	10	38	00	"	477	00	c	m	1	less	"	"
"	"	1	m	1	1	1	1	1	mo	1	10	38	00	"	38	00	c	m	1	"	"	"
"	"	15	s	1	1	1	1	1	yr	12	10	40	00	"	480	00	c	m	1	not answe'd	"	"
"	England	3	s	1	1	1	1	1	"	12	10	48	00	"	504	00	c	m	1	"	baker	20 00 per mo
"	"	4	s	1	1	1	1	1	"	10	10	40	00	"	400	00	c	m	1	"	"	"
"	"	8	m	1	1	1	1	1	"	10	10	40	00	"	400	00	c	m	1	same	farming	not answered
"	Austria	8	m	1	1	1	1	1	mo	12	10	38	00	"	78	00	c	m	1	"	"	"
"	Sweden	8	m	1	1	1	1	1	yr	12	10	38	00	"	626	00	c	m	1	not so good	mining	17 00 per mo
"	England	8	m	1	1	1	1	1	"	10 1/2	10	50	00	"	525	00	c	m	1	"	"	12 50 "
Miner	"	8	s	1	1	1	1	1	"	10	10	45	00	"	450	00	c	m	1	not so good	"	"
"	"	16	m	4	4	5	24	5	"	12	10	50	00	"	600	00	c	m	300	same	"	15 00 "
"	"	20	m	5	5	6	35	5	"	12	10	60	00	"	600	00	c	m	200	less	"	15 00 "
"	"	22	m	6	6	6	35	4	"	10 1/2	10	60	00	"	525	00	c	m	1	not so good	not answe'd	not answered
"	"	16	s	1	1	1	1	1	"	10 1/2	10	50	00	"	525	00	c	m	1	less	mining	16 00 per mo
"	"	13	m	2	2	4	20	10	"	12	10	48	00	"	576	00	c	m	1	less	"	"

† Refused.

TABLE No. 7.—Continued.

Occupation.	Line number.	How many hours for a day's work in the old country.	Amount of money at interest or in the bank.	If foreign born, how much money did you have on arrival in U. S.	Do you own your home. If so, its value.	If mortgaged, amount of mortgage.	Rate of interest.	Are you as well off as five years ago.	Loss of time.			If renting home, monthly rental.	If boarding, cost per week, including room.	Life insurance, how much.	Do you belong to a benevolent society.	Weekly benefit in case of sickness or accident.	Have you a sewing machine.	Have you a piano.	Have you an organ.	Do you take a newspaper.			Age began work	State of health then.	State of health now.	Amount of relief rendered friends in the old country.	Amount of money furnished to friends for passage to U. S.
									From sickness.—(Days.)	Inability to obtain work.—(Days.)	Causes not stated.—(Days.)									Daily.	Weekly.	Monthly.					
Fireman Laborer	859				no			yes							yes	\$5 00	no	no	no	no	no	15	good	good			
	860				"			"							"	6 00	yes	"	"	"	"	18	"	sickly			
	861		++		"			no	52		\$3 50				"	4 00	"	"	"	yes	"	17	good	bad			
	862	10			"						2 50				"	5 00	no	"	"	"	"	15	"	good			
	863				"			no					\$4 75		no	5 00	no	"	"	"	"	19	"	good			
"	864				"										yes	5 00	yes	"	"	yes	"	16	"	"			
	865				"								4 50		no	5 00	no	"	"	no	"	16	"	"			
	866				"										"	5 00	yes	"	"	"	16	"	"				
	867				"			yes			2 50				"	5 00	yes	"	"	"	"	13	"	"			
	868				"										"	5 00	no	"	"	"	"	16	"	"			
"	869				"			"	6	156	2 00				"	5 00	no	"	"	"	"	20	"	"			
	870				"										"	5 00	"	"	"	"	"	15	"	"			
	871				"										"	5 00	"	"	"	"	"	16	"	"			
	872				"			yes			4 00				"	5 00	yes	"	"	"	"	16	"	"			
	873				"						4 00				"	5 00	no	"	"	"	"	16	"	"			
Miner	874		+	+	"			"	78		4 00	\$2,000			"	5 00	yes	"	"	"	"	15	"	"			
	875				"			yes		13	4 00				"	5 00	no	"	"	"	"	16	"	"			
	876				"							4 00			"	6 25	"	"	"	"	"	16	"	"			
	877				"						4 00				yes	5 00	yes	"	"	"	"	15	"	"			
	878				"						4 00				"	5 00	no	"	"	"	"	13	"	"			
"	879				"										"	5 00	no	"	"	"	"	16	"	"			
	880		\$800		"			yes		156	2 50				"	5 00	yes	"	"	"	yes	13	"	"			
	881				"			"				4 50			"	5 00	no	"	"	no	"	13	"	"			
	882	8	400		"						4 00				"	5 00	"	"	"	"	"	12	"	"			
	883				"			no			2 50				"	5 00	yes	"	yes	"	"	14	"	"			
"	884	8	1,500		"			yes			4 00				"	5 00	"	"	"	"	yes	9	"	"			
	885	10	700		"						2 50				"	5 00	"	"	"	"	"	15	"	"			
	886		+	\$15	"			"			4 00				"	5 00	"	"	no	"	"	14	"	"			
	887				"			"			2 50				"	5 00	"	"	yes	"	yes	10	"	"			
	888	8			"			no			3 00				"	5 00	"	"	no	"	"	9	"	"			
"	889				"			yes			4 00				"	5 00	"	"	"	"	"	13	"	"			
	890	10			"			"			4 00				"	5 00	"	"	"	"	"	9	"	"			
	891	8			"			"			3 00				"	5 00	"	"	yes	"	"	8	"	"			

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[illegible]

Refused.

TABLE No. 7.—Continued.

Occupation.	Line number.	Age.	Nativity.	Nativity of parents.	How long in U. S., if foreign born.—(Years.)	Married or single.	How many children in family.	How many attend school.	How many depend on you for support.	How many years at present occupation.	How long with present employer.—(Years.)	Number of months employed during year.	How many hours for a day's work.	Wages paid.	Annual earnings.	Are you paid cash or trade.	How often are you paid.	Amount saved during the year.	How do wages compare with former years in this country.	What occupation did you follow in the old country.	Wages received in the old country.
Miner.....	937 34	England	England	England	20	m	4	2	5	17 17 yrs	12	12	10	\$48 00 pr m	\$576 00	c	m	.....	same	mining	\$20 00 per mo
".....	938 42	U. S.	Ireland	Ireland	17	m	4	2	6	20 17 "	12	12	10	50 00 "	600 00	c	m	.....	"	"	"
".....	939 35	U. S.	Sweden	Sweden	13	m	4	2	6	15 16 "	12	12	10	48 00 "	576 00	c	m	.....	not ans'wd	farming	not ans'wd
Mining clerk.....	940 33	Sweden	U. S.	U. S.	...	m	3	2	8	12 10 "	10	10	10	50 00 "	500 00	c	m	.....	same	"	"
".....	941 37	U. S.	U. S.	U. S.	...	m	2	2	8	14 14 "	12	12	10	112 50 "	1,360 00	c	m	.....	not ans'wd	"	"
Laborer.....	942 14	U. S.	England	England	...	s	6	4	7	1 m 1 mo	1	1	10	20 00 "	20 00	c	m	.....	same	laborer	15 00 per mo
".....	943 41	Germany	Germany	Germany	17	m	6	4	7	14 14 yrs	12	12	10	45 00 "	540 00	c	m	.....	"	farmer	10 00 per mo
".....	944 20	England	England	England	14	s	...	...	...	4 4 "	12	12	10	39 00 "	468 00	c	m	.....	"	"	"
".....	945 25	Sweden	Sweden	Sweden	2	s	...	...	...	2 2 "	12	12	10	45 00 "	540 00	c	m	.....	"	"	"
".....	946 26	Austria	Austria	Austria	5	m	...	...	1	5 5 "	12	12	10	53 00 "	624 00	c	m	.....	not ans'wd	"	not ans'wd
".....	947 18	"	"	"	2	s	...	...	...	1 1 "	12	12	10	42 00 "	504 00	c	m	.....	same	farmer	not ans'wd
".....	948 45	"	"	"	7	m	1	...	2	5 5 "	12	12	10	45 00 "	540 00	c	m	.....	better	farmer	not ans'wd
".....	949 28	Canada	Canada	Canada	20	m	1	2	2	1 1 "	12	12	10	36 00 "	432 00	c	m	.....	same	farmer	not ans'wd
".....	950 30	"	"	"	8	m	5	2	5	2 m 3 mo	12	12	10	45 00 "	540 00	c	m	.....	"	laborer	don't know
".....	951 35	"	"	"	16	m	4	4	5	1 1 yr	12	12	10	45 00 "	540 00	c	m	.....	"	"	"
Miner.....	952 42	Finland	Finland	Finland	13	m	9	2	10	8 "	12	12	10	53 00 "	636 00	c	m	.....	not ans'wd	farmer	12 00 per mo
".....	953 40	"	"	"	2	m	...	...	1	2 2 "	12	12	10	58 00 "	696 00	c	m	.....	"	"	13 00 "
".....	954 30	U. S.	U. S.	U. S.	...	m	1	...	2	12 12 "	12	12	10	48 00 "	576 00	c	m	.....	same	miner	15 00 per mo
".....	955 41	England	England	England	19	m	4	2	5	25 13 "	12	12	10	48 00 "	576 00	c	m	.....	"	not ans'wd	not ans'wd
".....	956 34	"	"	"	17	m	2	1	8	19 12 "	12	12	10	53 00 "	636 00	c	m	.....	"	"	"
".....	957 28	"	"	"	11	m	1	...	2	11 2 "	12	12	10	50 00 "	600 00	c	m	.....	"	"	"
".....	958 45	"	"	"	16	m	...	...	...	30 15 "	12	12	10	48 00 "	576 00	c	m	.....	"	mining	15 00 per mo
".....	959 38	"	"	"	19	m	4	2	5	23 19 "	12	12	10	50 00 "	600 00	c	m	.....	"	"	15 00 "
".....	960 26	"	"	"	6	s	...	...	...	9 9 "	12	12	10	50 00 "	600 00	c	m	.....	"	"	15 00 "
".....	961 39	"	"	"	25	s	...	...	...	20 15 "	12	12	10	48 00 "	576 00	c	m	.....	not ans'wd	miner	15 00 per mo
".....	962 44	"	"	"	15	m	3	...	4	30 15 "	12	12	10	48 00 "	576 00	c	m	.....	same	"	15 00 "
".....	963 27	"	"	"	7	s	...	...	1	4 4 "	12	12	10	48 00 "	576 00	c	m	.....	"	"	"
Machinist.....	964 22	Sweden	Sweden	Sweden	8	m	...	...	1	5 5 "	12	12	10	55 00 "	660 00	c	m	.....	"	machinist	35 00 "
".....	965 26	U. S.	U. S.	U. S.	...	s	...	...	...	11 10 "	12	12	10	80 00 "	960 00	c	m	.....	"	"	"
".....	966 28	"	"	"	...	m	...	...	1	8 7 "	11 1/2	11 1/2	10	58 00 "	1,080 00	c	m	.....	"	"	"
".....	967 30	"	"	England	...	m	2	...	8	6 6 "	12	12	10	78 00 "	936 00	c	m	.....	"	"	"
".....	968 24	"	"	"	...	m	1	...	1	1 1 "	12	12	10	78 00 "	936 00	c	m	.....	"	"	"
".....	969 20	England	England	"	7	m	2	...	3	1 1 3 "	11 1/2	11 1/2	10	75 00 "	891 25	c	m	"	machinist	30 00 per mo

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"	970 40	"	"	"	20	m	2	3	4	3	"	12	10	85 00	"	1,020 00	c	m	*	"	not answ'd	not answ'd
"	971 40	"	"	"	21	m	1	1	18	15	"	12	10	80 00	"	980 00	c	m	400	"	"	"
"	972 28	"	"	"	10	s	3	8	9	3	"	12	10	80 00	"	980 00	c	m	500	"	machinist	don't know
"	973 29	"	"	"	15	m	5	10	10	10	"	12	10	78 00	"	986 00	c	m	.....	"	farmer	not answ'd
Boss trammer	974 39	Austria	Austria	Austria	15	m	5	10	10	10	"	11 1/2	10	65 00	"	763 75	c	m	.....	"	farmer	not answ'd
Tramper	975 31	"	"	"	1	m	1	1	1	1	"	12	10	53 00	"	686 00	c	m	.....	not answ'd	"	10 00 per mo
"	976 21	"	"	"	1	s	1	1	1	1	"	12	10	53 00	"	636 00	c	m	.....	same	"	13 50 "
"	977 26	"	"	"	4	m	2	4	4	4	"	12	10	53 00	"	636 00	c	m	125	"	"	18 00 "
"	978 29	"	"	"	8	m	4	8	6	6	"	12	10	53 00	"	636 00	c	m	.....	"	not answ'd	not answ'd
"	979 21	"	"	"	1	s	1	1	1	1	"	12	10	53 00	"	636 00	c	m	.....	"	farmer	18 00 per mo
"	980 51	"	"	"	5	m	3	4	5	5	"	10	10	53 00	"	530 00	c	m	.....	"	"	self
Carpenter	981 21	U. S.	Canada	Canada	18	s	4	4	4	4	"	12	10	52 00	"	624 00	c	m	.....	"	not answ'd	not answ'd
"	982 45	Canada	Ireland	Ireland	24	m	5	15	15	15	"	12	10	60 00	"	720 00	c	m	240	not answ'd	miner	not answ'd
"	983 45	Ireland	Germany	Germany	40	m	6	28	15	15	"	12	10	55 00	"	600 00	c	m	.....	not answ'd	miner	15 00 per mo
"	984 42	Germany	"	"	40	m	4	16	16	16	"	11	10	65 00	"	715 00	c	m	125	same	.....	.....
Timberman	985 50	England	England	England	19	m	4	6	6	6	"	12	10	58 00	"	696 00	c	m	*	"	miner	15 00 per mo
Mason	986 52	Germany	Germany	Germany	25	m	4	11	11	11	"	12	10	75 00	"	900 00	c	m	150	not answ'd	mail carrier	don't know
Teamster	987 40	Canada	Canada	Canada	37	m	8	17	17	17	"	12	10	47 00	"	564 00	c	m	.....	same	farmer	not answ'd
Farm boss	988 44	"	"	"	20	m	4	14	14	14	"	12	10	50 00	"	600 00	c	m	*	"	farmer	not answ'd
Brakeman	989 20	U. S.	"	"	.....	s	1	1	1	1	"	12	10	45 00	"	540 00	c	m	.....	"	.....	.....
Engineer	990 46	England	England	England	25	m	2	20	15	15	"	12	10	75 00	"	900 00	c	m	400	"	machinist	don't know
"	991 30	"	"	"	9	m	2	9	8	8	"	12	10	100 00	"	1,200 00	c	m	750	"	farmer	not answ'd
Miner	992 41	Germany	Germany	Germany	23	m	8	6	6	6	"	12	10	48 00	"	576 00	c	m	.....	not answ'd	miner	50 00 per mo
"	993 42	Norway	Norway	Norway	6	m	7	8	8	8	"	12	10	50 00	"	600 00	c	m	.....	same	less	15 00
"	994 40	Austria	Austria	Austria	20	m	2	18	18	18	"	12	10	48 00	"	576 00	c	m	150	"	.....	.....
"	995 26	U. S.	Ireland	Ireland	.....	m	1	6	6	6	"	12	10	48 00	"	576 00	c	m	.....	"	.....	.....
"	996 18	Canada	England	England	.....	s	.....	5	5	5	"	12	10	32 00	"	384 00	c	m	.....	same	.....	.....
"	997 21	"	"	"	.....	s	.....	7	7	7	"	12	10	43 00	"	576 00	c	m	.....	not answ'd	miner	don't know
"	998 58	Scotland	Scotland	Scotland	23	m	3	16	16	16	"	12	10	54 00	"	648 00	c	m	150	same	.....	.....
"	999 20	England	England	England	15	s	.....	4	4	4	"	12	10	45 00	"	540 00	c	m	*	same	.....	.....
"	1000 17	"	"	"	15	s	.....	1	1	1	"	12	10	30 00	"	360 00	c	m	.....	"	miner	15 00 per mo
"	1001 44	"	"	"	20	m	4	18	18	18	"	12	10	48 00	"	576 00	c	m	100	"	"	15 00 "
"	1002 42	"	"	"	20	m	6	16	16	16	"	12	10	48 00	"	576 00	c	m	150	not answ'd	"	20 00 "
"	1003 44	"	"	"	18	m	6	17	17	17	"	12	10	45 00	"	540 00	c	m	150	not answ'd	"	15 00 "
"	1004 34	"	"	"	8	m	2	22	4	4	"	12	10	45 00	"	540 00	c	m	150	not so good	.....	.....
"	1005 18	"	"	"	4	s	.....	3	3	3	"	12	10	30 00	"	360 00	c	m	.....	same	miner	15 00 per mo
"	1006 35	"	"	"	20	m	4	9	9	9	"	12	10	48 00	"	576 00	c	m	.....	smaller	"	15 00 "
"	1007 38	"	"	"	20	m	2	20	20	20	"	12	10	50 00	"	600 00	c	m	120	"	"	15 00 "
"	1008 45	"	"	"	20	m	3	8	8	8	"	12	10	50 00	"	600 00	c	m	150	"	"	15 00 "
"	1009 50	"	"	"	27	m	1	14	14	14	"	12	10	43 00	"	516 00	c	m	*	"	"	30 00 "
Laborer	1010 28	Austria	Austria	Austria	2	m	4	5	2	2	"	12	10	53 00	"	636 00	c	m	.....	not answ'd	farmer	not answ'd
"	1011 24	"	"	"	8	s	.....	3	3	3	"	12	10	54 00	"	648 00	c	m	.....	same	laborer	12 00 per mo
"	1012 25	"	"	"	5	s	.....	.....	3	3	"	12	8	53 00	"	636 00	c	m	.....	don't know	farmer	not answ'd
"	1013 30	"	"	"	4	s	.....	.....	4	4	"	12	10	53 00	"	636 00	c	m	.....	not answ'd	"	"
"	1014 28	"	"	"	4	s	.....	.....	3	3	"	12	10	53 00	"	636 00	c	m	.....	same	"	"

TABLE NO. 7.—Continued.

Occupation.	Line number.	How many hours for a day's work in the old country.	Amount of money at interest or in the bank.	If foreign born, how much money did you have on arrival in U. S.	Do you own your home, if so, its value.	If mortgaged, amount of mortgage.	Rate of interest.	Are you as well off as five years ago.	Loss of time.			If renting home, monthly rental.	If boarding, cost per week, including room.	Life insurance, how much.	Do you belong to a benefit society.	Weekly benefit in case of sickness or accident.	Have you a sewing machine.	Have you a piano.	Have you an organ.	Do you take a newspaper.			Age began work.	State of health then.	State of health now.	Amount of relief rendered friends in the old country.	Amount of money furnished to friends for passage to U. S.
									From sickness.—(Days.)	Inability to obtain work.—(Days.)	Causes not stated.—(Days.)									Daily.	Weekly.	Monthly.					
Miner	937	8	++		\$875			yes			\$4 00		\$1,000	yes	\$5 00	yes	no	no	yes	no	no	12	good				
"	938	8	++		no						4 00			6 00								20					
"	939		\$750		650									6 00								10					
Mining clerk	940		++		1,500								2,000	9 00							yes	19					
"	941		++											6 00													
Laborer	942		+		no									6 00	no						no	14					
"	943	8	+		500									5 00	yes						yes	12					
"	944			8	no							\$4 00		6 00	no						no	16					
"	945		+		700									6 00	yes						no	14					
"	946		+											5 00								12					
"	947				no			yes				4 50			no							17			\$250		
"	948											4 50			yes						yes	8					
"	949		+		600						5 00			6 00	no						no	12					
"	950	12	+		no						6 00			6 00	yes						yes	8					
Miner	951			50									1,000	6 00											150		
"	952				825										no							17			76		
"	953		++		no						4 00			6 00	yes						no	12					
"	954		++								4 00			6 00	yes						yes	18					
"	955	8									4 00			6 00	no						no	15					
"	956		++								4 00			6 00	yes							14					
"	957		++								5 00			1,000	no						yes	17					
"	958	8	++		900								5,000	5 00							no	12					
"	959	8	++		800									6 00	yes						yes	15					
"	960	8	900		no							4 50		6 00	no						no	11					
"	961		++									4 50		6 00	yes						yes	19			76		
"	962	8	++		100									6 00	no							14					
"	963	8	++		no							5 00		5 00	yes						no	8			76		
Machinist	964	8	+	40							8 00			6 00	yes							16					
"	965		5,000		1,500							4 50		2,000	no							15					
"	966		++		800								2,000	6 00	yes							14					
"	967		+		no									5 00	no						yes	14					
"	968		+											6 00								14					
"	969	8	+											1,000	6 00							16				\$50	

[illegible]

#Refused.

TABLE No. 7.—Continued.

Occupation.	Line number.	Age.	Nativity.	Nativity of parents.	How long in U. S., if foreign born.—(Years.)	Married or single.	How many children in family.	How many attend school.	How many depend on you for support.	How many years at present occupation.	How long with present employer.—(Years.)	Number of months employed during year.	How many hours for a day's work.	Wages paid.	Annual earnings.	Are you paid cash or trade.	How often are you paid.	Amount saved during the year.	How do wages compare with former years in this country.	What occupation did you follow in the old country.	Wages received in the old country.
Laborer	1015 24	34	Austria	Austria	1	m	2	—	8	1	1 yr	12	10	\$42 00 pr m	\$504 00	c	m	—	not ans'd	farmer	not ans'd
"	1016 21	31	"	"	1	s	—	—	—	1	1	12	10	53 00	636 00	c	m	—	"	"	"
"	1017 25	25	"	"	2	s	—	—	—	12 10	"	12	10	42 00	504 00	c	m	—	not ans'd	"	"
"	1018 36	36	"	"	1	m	4	—	5	1	1	12	10	53 00	636 00	c	m	—	"	"	"
"	1019 16	16	U. S.	U. S.	—	s	—	—	—	1	1	12	10	20 00	240 00	c	m	—	"	"	"
"	1020 45	45	Ireland	Ireland	25	m	4	1	4	2	2	12	10	40 00	480 00	c	m	—	not ans'd	miner	\$15 00 per mo
"	1021 43	43	Germany	Germany	2	m	1	1	2	2	12	9	10	40 00	360 00	c	m	\$75	same	laborer	16 00
"	1022 38	38	"	"	23	m	7	4	7	20	12	12	10	54 00	648 00	c	m	50	"	farmer	not ans'd
Carpenter	1023 31	31	England	England	7	m	2	1	3	7	7	12	10	51 00	600 00	c	m	—	not ans'd	"	not ans'd
"	1024 40	40	Canada	Canada	8	m	7	6	9	8	3	12	10	51 00	648 00	c	m	—	"	carpenter	26 00 per mo
Blacksmith	1025 25	25	U. S.	Germany	—	m	1	—	2	8	3	12	10	49 00	598 00	c	m	100	same	"	—
"	1026 41	41	Nova Scotia	N. S.	40	m	7	4	6	4	4	12	10	85 00	1,020 00	c	m	200	lower	"	—
"	1027 33	33	Sweden	Sweden	15	m	1	—	8	15	15	12	10	60 00	720 00	c	m	150	not ans'd	mill	not ans'd
Timberman	1028 31	31	Austria	Austria	6	m	2	—	3	2	2	12	10	48 00	576 00	c	m	—	less	farmer	—
Oiler	1029 16	16	U. S.	Ireland	—	s	—	—	—	1	1	12	10	28 00	312 00	c	m	—	—	"	—
Engineer	1030 45	45	"	"	—	m	8	6	5	20	20	12	10	57 00	684 00	c	m	—	smaller	"	—
"	1031 37	37	"	Germany	—	m	2	2	3	14	14	12	10	60 00	720 00	c	m	150	same	"	—
Machinist	1032 45	45	Scotland	Scotland	—	m	4	—	6	8	3	12	10	60 00	720 00	c	m	175	smaller	machinist	25 00 per mo
"	1033 30	30	Canada	Canada	14	m	3	—	5	12	12	12	10	65 00	780 00	c	m	360	not ans'd	"	not ans'd
Mining capt.	1034 28	28	"	Scotland	—	m	1	1	2	4	4	12	10	110 00	1,320 00	c	m	800	same	"	—
Teamster	1035 46	46	Ireland	Ireland	35	m	4	2	5	8	8	12	10	47 00	564 00	c	m	—	lower	"	—
Watchman	1036 40	40	"	"	26	m	10	7	9	3	—	8	12	40 00	320 00	c	m	—	smaller	railroad	45 00 per mo
Shaftman	1037 55	55	Germany	Germany	15	m	—	—	1	15	15	12	10	45 00	540 00	c	m	—	less	laborer	12 00
Trammer	1038 21	21	Austria	Austria	3	s	—	—	—	3	3	12	10	40 00	480 00	c	m	—	not ans'd	trammer	12 00
"	1039 24	24	"	"	4	s	—	—	—	3	3	12	10	40 00	480 00	c	m	—	less	railroad	15 00
Fireman	1040 57	57	Switzerl'd	Switzerl'd	28	m	6	3	5	10	10	12	10	47 00	564 00	c	m	+	"	"	"
Miner's helper	1041 18	18	England	England	1	s	—	—	—	1	1	12	10	32 00	384 00	c	m	—	—	mining	18 00
Miner	1042 45	45	"	"	30	m	1	—	2	4	4	12	10	50 00	600 00	c	m	—	not ans'd	miner	15 00 per mo
"	1043 23	23	"	"	5	s	—	—	—	5	5	11 1/2	10	43 00	515 25	c	m	—	"	"	15 00
"	1044 40	40	"	"	15	m	4	2	5	13	13	12	10	55 00	660 00	c	m	—	smaller	"	15 00
"	1045 19	19	"	"	12	s	—	—	—	6	6	12	10	48 00	576 00	c	m	200	same	"	15 00 per mo
"	1046 27	27	"	"	20	m	4	4	5	15	15	12	10	48 00	576 00	c	m	—	"	miner	15 00 per mo
"	1047 21	21	"	"	6	s	—	—	—	6	6	12	10	50 00	600 00	c	m	—	"	"	10 00

"	1049 58	"	"	"	11	m	3	8	1	11 11	"	10	10	48 00	"	480 00	c	m	+	"	"	20 00	"
"	1049 40	"	"	"	26	m	8	8	7	14 14	"	12	10	48 00	"	576 00	c	m	.....	"	"	15 00	"
"	1050 39	"	"	"	20	m	5	4	6	15 15	"	12	10	48 00	"	576 00	c	m	.....	"	"	25 00	"
"	1051 25	"	"	"	18	m	1	4	2	4 4	"	11 1/2	10	48 00	"	552 00	c	m	12 1/2	"	"	15 00	per mo
"	105 35	"	"	"	18	m	6	3	7	17 17	"	11 1/2	10	48 00	"	552 00	c	m	.....	not ans'w'd	mining	15 00	per mo
"	1053 07	"	"	"	50	m	.....	8	1	15 15	"	12	10	45 00	"	540 00	c	m	100	less	farmer	not ans'w'd	
"	1054 45	"	"	"	14	m	5	5	5	13 13	"	12	10	45 00	"	540 00	c	m	+	same	miner	15 00	per mo
"	1055 39	"	"	"	17	m	7	5	8	8 8	"	11 1/2	10	50 00	"	567 50	c	m	.....	"	"	15 00	"
"	1056 33	"	"	"	16	m	2	2	8	9 9	"	12	10	48 00	"	516 00	c	m	100	smaller	"	15 00	"
"	1057 30	"	"	"	24	m	9	4	8	18 18	"	12	10	50 00	"	600 00	c	m	+	same	farmer	not ans'd	
"	1058 55	Germany	Germany	Germany	30	m	7	2	6	13 13	"	12	10	48 00	"	576 00	c	m	.....	not ans'w'd	not ans'w'd	"	
"	1059 17	Canada	Canada	Scotland	13	s	.....	.....	.....	8 8	"	12	10	35 00	"	420 00	c	m	.....	same	"	.....
"	1060 21	"	"	"	13	s	.....	.....	.....	2 2	"	12	10	54 00	"	648 00	c	m	.....	not ans'w'd	"	.....
"	1061 17	U. S.	U. S.	England	8	s	.....	.....	.....	2 2	"	12	10	32 00	"	384 00	c	m	.....	not ans'w'd	"	.....
"	1062 52	England	England	"	30	m	5	2	6	19 19	"	12	10	52 00	"	624 00	c	m	.....	"	"	5 00	per mo
"	1063 19	U. S.	U. S.	"	.....	s	.....	.....	.....	4 4	"	12	10	32 00	"	384 00	c	m	.....	same	"	.....
"	1064 20	"	"	"	.....	s	.....	.....	.....	1 1	"	6	10	40 00	"	240 00	c	m	100	same	"	.....
"	1065 16	"	"	"	.....	s	.....	.....	.....	2 2	"	12	10	32 00	"	384 00	c	m	.....	not ans'w'd	"	.....
"	1066 18	"	"	"	.....	s	.....	.....	.....	4 4	"	12	10	48 00	"	576 00	c	m	.....	not ans'w'd	"	.....
"	1067 15	"	"	"	.....	s	.....	.....	.....	3 m 2	"	12	10	20 00	"	240 00	c	m	.....	"	"	.....
Machinist	1068 21	Canada	Canada	Canada	15	s	.....	.....	.....	5 5	"	12	10	49 00	"	588 00	c	m	.....	not ans'w'd	"	.....
"	1069 19	"	"	Scotland	13	s	.....	.....	.....	1 1	"	12	10	35 00	"	420 00	c	m	.....	"	"	.....
"	1070 29	"	"	Canada	20	m	7	3	8	20 20	"	12	10	48 00	"	576 00	c	m	.....	same	not ans'w'd	not ans'd	
"	1071 54	Scotland	Scotland	"	44	m	12	10	10	14 14	"	12	10	39 00	"	468 00	c	m	.....	"	"	25 00	per mo
"	1072 45	"	"	"	1 1/2	m	6	4	7	1 1/2 1 1/2	"	4	10	45 00	"	180 00	c	m	.....	.....	laborer	25 00	per mo
"	1073 47	Germany	Germany	Germany	15	m	5	2	5	17 17	"	11 1/2	10	40 00	"	460 00	c	m	.....	smaller	farming	not ans'd	
"	1074 21	U. S.	U. S.	"	.....	s	.....	.....	.....	1 1	"	12	10	43 00	"	504 00	c	m	.....	not ans'w'd	"	.....
"	1075 52	England	England	England	21	m	8	1	3	11 11	"	12	10	40 00	"	480 00	c	m	150	smaller	mining	15 00	per mo
"	1076 35	Ireland	Ireland	"	25	m	2	1	8	15 15	"	12	10	40 00	"	480 00	c	m	.....	same	"	.....
"	1077 48	Wales	Wales	"	23	m	6	2	4	8 8	"	12	10	60 00	"	720 00	c	m	100	smaller	mining	3 00	per mo
Blacksmith	1078 71	England	England	England	39	m	.....	.....	.....	10 10	"	12	10	50 00	"	600 00	c	m	200	"	blacksmith	don't know	
"	1079 33	Germany	Germany	"	8	m	8	4	4	8 8	"	12	10	68 00	"	816 00	c	m	175	same	"	.....
Brakeman	1080 21	Scotland	Scotland	"	1	m	1	.....	.....	1 1	"	12	10	44 1/2	"	528 00	c	m	.....	not ans'w'd	sawyer	20 00	per mo
"	1081 23	U. S.	U. S.	Germany	.....	s	.....	.....	.....	4 4	"	12	10	65 00	"	780 00	c	m	.....	not ans'w'd	"	.....
Boiler maker	1082 35	England	England	"	7	m	1	1	2	1 1	"	12	12	45 00	"	540 00	c	m	.....	same	mining	15 00	per mo
"	1083 24	U. S.	U. S.	Ireland	.....	s	.....	.....	.....	6 6	"	12	10	47 00	"	564 00	c	m	.....	not ans'w'd	"	.....
Engineer	1084 34	Ireland	Ireland	"	25	m	4	.....	.....	8 8	"	12	10	40 00	"	480 00	c	m	.....	same	mining	not ans'd	
Dryman	1085 40	"	"	"	23	m	10	5	10	6 6	"	12	10	50 00	"	600 00	c	m	.....	not ans'w'd	"	.....
Fireman	1086 50	Scotland	Scotland	"	13	m	7	3	6	13 13	"	12	8	53 00	"	636 00	c	m	+	same	"	15 00	per mo
Watchman	1087 40	England	England	"	19	m	.....	.....	.....	7 7	"	12	10	38 00	"	456 00	c	m	.....	smaller	"	15 00	"
Bell man	1088 14	Russia	Russia	"	8	m	3	1	4	6 6	"	12	8	53 00	"	636 00	c	m	.....	not ans'w'd	farmer	not ans'd	
Tramman	1089 27	Austria	Austria	"	8	m	.....	.....	.....	8 8	"	12	10	53 00	"	636 00	c	m	225	same	"	40 00	per year
"	1090 28	"	"	"	7	m	1	.....	.....	7 7	"	12	10	53 00	"	636 00	c	m	200	"	"	40 00	"
"	1091 22	"	"	"	8	s	.....	.....	.....	3 3	"	12	10	53 00	"	636 00	c	m	225	"	"	40 00	"
"	1092 26	"	"	"	5	m	1	.....	.....	2 2	"	12	10	53 00	"	636 00	c	m	225	"	"	40 00	"

† Refused.

TABLE NO. 7.—Continued.

Occupation.	Line number.	How many hours for a day's work in the old country.	Amount of money at interest or in the bank.	If foreign born, how much money did you have on arrival in U. S.	Do you own your home. If so, its value.	If mortgaged, amount of mortgage.	Rate of interest.	Are you as well off as five years ago.	Loss of time.			If renting home, monthly rental.	If boarding, cost per week, including room.	Life insurance, how much.	Do you belong to a benevolent society.	Weekly benefit in case of sickness or accident.	Have you a sewing machine.	Have you a piano.	Have you an organ.	Do you take a newspaper.			Age began work.	State of health then.	State of health now.	Amount of relief rendered friends in the old country.	Amount of money furnished to friends for passage to U. S.
									From sickness.—(Days.)	Inability to obtain work.—(Days.)	Causes not stated.—(Days.)									Daily.	Weekly.	Monthly.					
Laborer.....	1015	12	+	.....	no	.....	.....	yes	.....	.....	.....	.....	.....	.....	yes	\$5 00	no	no	no	no	no	7	good	good	.....	.....
".....	1016	12	+	.....	"	.....	.....	yes	.....	.....	.....	.....	.....	.....	yes	\$5 00	"	"	"	"	"	9	"	"	.....	.....
".....	1017	8	.....	.....	"	.....	.....	"	.....	.....	.....	.....	.....	.....	"	5 00	"	"	"	"	"	12	"	"	.....	.....
".....	1018	8	.....	.....	"	.....	.....	"	.....	.....	.....	.....	.....	.....	"	5 00	"	"	"	"	"	9	"	"	.....	.....
".....	1019	.....	.....	.....	"	.....	.....	yes	.....	.....	.....	.....	.....	.....	"	5 00	"	"	"	"	"	15	"	"	.....	.....
".....	1020	8	.....	.....	"	.....	.....	yes	.....	.....	.....	.....	.....	.....	"	5 00	yes	"	"	"	"	8	"	"	.....	.....
".....	1021	8	.....	.....	"	.....	.....	"	.....	.....	.....	.....	.....	.....	"	5 00	no	"	"	"	"	10	"	"	.....	.....
".....	1022	14	.....	.....	"	.....	.....	"	.....	.....	.....	.....	.....	.....	"	5 00	yes	"	"	"	"	18	"	"	.....	.....
Carpenter.....	1023	14	+	.....	"	.....	.....	"	.....	.....	.....	.....	.....	.....	"	5 00	no	"	"	"	"	8	"	"	.....	.....
".....	1024	.....	+	.....	"	.....	.....	"	.....	.....	.....	.....	.....	.....	"	5 00	yes	"	"	"	"	9	"	"	.....	.....
Blacksmith.....	1025	.....	+	.....	"	.....	.....	"	.....	.....	.....	.....	.....	.....	"	5 00	no	"	"	"	"	21	"	"	.....	.....
".....	1026	.....	3,000	.....	"	.....	.....	"	.....	.....	.....	.....	.....	.....	"	5 00	yes	"	"	"	"	9	"	"	.....	.....
Timberman.....	1027	8	1,000	.....	"	.....	.....	"	.....	.....	.....	.....	.....	.....	"	5 00	no	"	"	"	"	15	"	"	.....	360
Oiler.....	1028	12	.....	.....	"	.....	.....	"	.....	.....	.....	.....	.....	.....	"	5 00	no	"	"	"	"	15	"	"	.....	.....
".....	1029	.....	.....	.....	"	.....	.....	"	.....	.....	.....	.....	.....	.....	"	5 00	no	"	"	"	"	15	"	"	.....	.....
Engineer.....	1030	.....	.....	.....	"	.....	.....	"	.....	.....	.....	.....	.....	.....	"	5 00	yes	"	"	"	"	12	"	"	.....	.....
".....	1031	.....	.....	.....	"	.....	.....	"	.....	.....	.....	.....	.....	.....	"	5 00	yes	"	"	"	"	12	"	"	.....	.....
Machinist.....	1032	8	700	.....	"	.....	.....	"	.....	.....	.....	.....	.....	.....	"	5 00	no	"	"	"	"	18	"	"	.....	.....
".....	1033	.....	.....	.....	"	.....	.....	"	.....	.....	.....	.....	.....	.....	"	5 00	yes	"	"	"	"	12	"	"	.....	.....
Mining Capt.....	1034	.....	1,500	.....	"	.....	.....	"	.....	.....	.....	.....	.....	.....	"	5 00	yes	"	"	"	"	12	"	"	.....	.....
Teamster.....	1035	.....	760	.....	"	.....	.....	"	.....	.....	.....	.....	.....	.....	"	5 00	"	"	"	"	"	17	"	"	.....	.....
".....	1036	.....	.....	.....	"	.....	.....	"	.....	.....	.....	.....	.....	.....	"	5 00	"	"	"	"	"	11	"	"	.....	.....
Watchman.....	1036	.....	+	.....	"	.....	.....	no	104	.....	.....	.....	.....	.....	"	5 00	"	"	"	"	"	9	"	"	.....	.....
Shaftman.....	1037	11	+	.....	"	.....	.....	yes	.....	.....	.....	.....	.....	.....	"	5 00	"	"	"	"	"	17	"	"	.....	.....
Trammer.....	1038	8	.....	.....	"	.....	.....	"	.....	.....	.....	.....	.....	.....	"	5 00	no	"	"	"	"	12	"	"	.....	.....
".....	1039	8	.....	.....	"	.....	.....	yes	.....	.....	.....	.....	.....	.....	"	5 00	yes	"	"	"	"	9	"	"	.....	.....
Fireman.....	1040	12	.....	.....	"	.....	.....	yes	.....	.....	.....	.....	.....	.....	"	5 00	yes	"	"	"	"	9	"	"	.....	.....
Miner's helper.....	1041	10	.....	.....	"	.....	.....	yes	.....	.....	.....	.....	.....	.....	"	5 00	no	"	"	"	"	13	"	"	.....	.....
Miner.....	1042	.....	300	.....	"	.....	.....	yes	.....	.....	.....	.....	.....	.....	"	5 00	yes	"	"	"	"	16	"	"	.....	.....
".....	1043	8	.....	.....	"	.....	.....	"	.....	.....	.....	.....	.....	.....	"	5 00	no	"	"	"	"	11	"	"	.....	.....
".....	1044	8	.....	.....	"	.....	.....	"	.....	.....	.....	.....	.....	.....	"	5 00	yes	"	"	"	"	20	"	"	.....	.....
".....	1045	8	200	.....	"	.....	.....	"	.....	.....	.....	.....	.....	.....	"	5 00	yes	"	"	"	"	13	"	"	.....	.....
".....	1046	8	+	.....	"	.....	.....	yes	.....	.....	.....	.....	.....	.....	"	5 00	yes	"	"	"	"	9	"	"	.....	.....
".....	1047	8	.....	.....	"	.....	.....	yes	.....	.....	.....	.....	.....	.....	"	5 00	no	"	"	"	"	15	"	"	.....	.....

1048	8	+	25	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048
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Refused.

TABLE NO. 7.—Continued.

Occupation.	Line number.	Age.	Native.	Nativity of parents.	How long in U. S., if foreign born.—(Years.)	Married or single.	How many children in family.	How many attend school.	How many depend on you for support.	How many years at present occupation.	How long with present employer.—(Years.)	Number of months employed during year.	How many hours for a day's work.	Wages paid.	Annual earnings.	Are you paid cash or trade.	How often are you paid.	Amount saved during the year.	How do wages compare with former years in this country.	What occupation did you follow in the old country.	Wages received in the old country.
Trammer	1093	40	Austria	Austria	2	m	—	—	—	6	4	12	10	\$53 00	\$636 00	c	m	\$200	same	farmer	\$40 00 per yr
"	1094	24	"	"	4	s	—	—	—	4	4	12	10	53 50	636 00	c	m	200	"	"	40 00 "
"	1095	25	"	"	2	s	—	—	—	2	2	12	10	53 00	636 00	c	m	200	"	"	40 00 "
"	1096	28	"	"	1	s	—	—	—	1	1	12	10	53 00	636 00	c	m	200	"	"	30 00 "
"	1097	23	Italy	Italy	8	s	—	—	—	3	3	12	10	53 00	636 00	c	m	200	"	boatman	12 00 per mo
Laborer	1098	22	U. S.	U. S.	—	s	—	—	—	6	6	12	10	39 00	468 00	c	m	100	"	—	—
"	1099	15	"	"	—	s	—	—	—	1 w	1 wk	12	10	32 00	8 00	c	m	—	—	—	—
"	1100	20	"	Ireland	—	s	—	—	—	3	3	12	10	40 00	480 00	c	m	—	same	—	—
"	1101	14	"	Germany	—	s	—	—	—	3	3	12	10	32 00	384 00	c	m	—	"	—	—
"	1102	23	"	"	—	s	—	—	—	7	7	12	10	40 00	480 00	c	m	—	—	—	—
"	1103	23	England	England	22	s	—	—	—	3	3	12	10	47 00	564 00	c	m	200	higher	—	—
"	1104	17	Finland	Finland	16	s	—	—	—	1 m	1 mo	1	10	32 00	22 00	c	m	—	not ans'd	—	—
"	1105	30	"	"	2	s	—	—	—	15	2 yrs	12	10	39 00	468 00	c	m	125	same	laborer	40 00 per yr
"	1106	26	Norway	Norway	6	s	—	—	—	6	6	12	10	29 00	468 00	c	m	150	"	farmer	16 00 per mo
"	1107	36	Austria	Austria	1	m	—	—	—	1	1	12	10	45 00	540 00	c	m	—	"	—	40 00 per yr
Carpenter	1108	35	Finland	Finland	15	m	2	—	—	15	15	12	10	54 00	648 00	c	m	200	"	carpenter	18 90 per mo
"	1109	30	"	"	7	m	2	—	—	6	3	12	10	54 00	648 00	c	m	—	not ans'd	—	—
"	1110	29	U. S.	U. S.	1	m	3	—	—	11	11	12	10	60 00	720 00	c	m	—	same	—	—
"	1111	17	"	Germany	—	s	—	—	—	4	4	6	10	26 00	156 00	c	m	—	"	—	—
Blacksmith	1112	29	Germany	Germany	7	m	2	—	—	13	3	12	10	65 00	780 00	c	m	225	"	blacksmith	15 00 per mo
"	1113	30	England	England	16	m	3	2	—	16	16	12	10	75 00	900 00	c	m	200	"	—	—
Miner	1114	29	Canada	Canada	1	s	—	—	—	11	1 mo	1	10	51 00	55 00	c	m	200	same	laborer	26 00 per mo
"	1115	25	Sweden	Sweden	2	s	—	—	—	2	2 yrs	12	10	48 00	576 00	c	m	250	—	farmer	40 00 per yr
"	1116	29	Wales	Wales	14	m	3	2	—	9	6	12	10	55 00	660 00	c	m	200	"	—	—
"	1117	30	Finland	Finland	16	m	6	2	—	10	10	12	10	48 00	576 00	c	m	125	"	laborer	30 00 per yr
"	1118	40	Norway	Norway	14	m	2	—	—	20	10	12	10	45 00	576 00	c	m	200	"	miner	16 00 per mo
"	1119	34	"	"	17	m	5	3	—	20	13	12	10	48 00	576 00	c	m	125	"	—	16 00 "
"	1120	26	"	"	8	m	1	—	—	13	8	12	10	48 00	576 00	c	m	—	"	—	8 00 "
"	1121	40	Ireland	Ireland	20	m	2	—	—	3	18	12	10	55 00	660 00	c	m	250	"	—	15 00 "
"	1122	48	"	"	24	m	7	3	—	8	1	12	10	50 00	600 00	c	m	100	"	—	16 00 "
"	1123	40	England	England	19	m	5	3	—	26	19	12	10	45 00	576 00	c	m	—	less	—	20 00 "
"	1124	22	"	"	6	s	—	—	—	12	5	12	10	48 00	576 00	c	m	200	same	—	15 00 "
"	1125	40	"	"	20	s	—	—	—	3	15	12	10	55 00	630 00	c	m	200	—	—	20 00 "

"	1123	30	U. S.	"	U. S.	10	s	---	---	---	---	20	10	"	12	10	55	00	600	00	o	m	235	"	20 00	"
"	1127	21	U. S.	England	England	---	s	---	---	---	---	8	8	"	12	10	48	00	576	00	o	m	225	"	---	---
"	1128	24	"	"	U. S.	---	s	---	---	---	---	6	6	"	12	10	48	00	576	00	o	m	175	"	---	---
Watchman	1130	22	Scotland	Scotland	Scotland	6	m	5	8	6	---	1	6	"	12	10	48	00	576	00	o	m	150	laborer	20 00	per mo
Mine laborer	1131	24	Austria	Austria	Austria	4	s	---	---	---	---	4	4	"	12	10	49	00	576	00	o	m	200	farmer	40 00	per yr
Timberman helper	1132	50	Italy	Italy	Italy	8	m	3	1	8	---	---	8	"	12	10	48	00	576	00	o	m	100	"	40 00	"
Mason	1133	36	Germany	Germany	Germany	30	m	6	4	7	---	---	20	"	12	10	75	00	900	00	o	m	150	mason	20 00	per mo
Lander	1134	43	England	England	England	23	m	1	1	1	---	---	3	"	13	10	54	00	648	00	o	m	450	father	---	---
Engineer	1135	54	England	England	England	20	m	2	1	3	---	---	80	"	12	10	65	00	780	00	o	m	450	engineer	20 00	per mo
Drill boy	1136	16	U. S.	U. S.	U. S.	---	s	---	---	---	---	4	4	"	6	12	32	00	192	00	o	m	---	"	---	---
Laborer	1137	45	Finland	Finland	Finland	35	m	1	1	2	---	---	10	"	12	10	39	40	468	00	o	m	100	"	---	---
"	1138	28	"	"	"	10	m	8	---	---	---	4	2	"	12	10	31	60	360	00	o	m	---	laborer	40 00	per yr
"	1139	40	"	"	"	5	m	4	2	4	---	---	5	"	12	10	30	00	468	00	o	m	200	sawyer	10 40	per mo
"	1140	40	"	"	"	16	m	3	8	4	---	---	15	"	12	10	39	00	468	00	o	m	125	farmer	not ans w'd	---
"	1141	30	"	"	"	6	m	---	---	---	---	4	4	"	6	10	39	00	234	00	o	m	200	"	40 00	per yr
"	1142	50	Norway	Norway	Norway	8	m	2	2	8	---	---	2	"	12	10	39	00	468	00	o	m	---	miner	8 00	per mo
"	1143	13	"	"	"	19	m	6	3	7	---	---	13	"	12	10	25	00	340	00	o	m	---	"	16 00	"
"	1144	23	Austria	Austria	Austria	2	s	---	---	---	---	2	2	"	12	10	41	00	576	00	o	m	175	farmer	40 00	per yr
"	1145	40	"	"	"	1	m	---	---	---	---	1	1	"	12	10	48	00	576	00	o	m	200	"	40 00	"
"	1146	23	"	"	"	8	m	4	2	5	---	---	8	"	12	10	40	00	490	00	o	m	125	"	40 00	"
"	1147	40	"	"	"	5	m	2	---	---	---	5	5	"	12	10	48	00	576	00	o	m	100	"	40 00	"
"	1148	25	Canada	Canada	Canada	5	s	---	---	---	---	10	5	"	12	10	40	00	440	00	o	m	125	laborer	26 00	per mo
"	1149	22	U. S.	U. S.	U. S.	---	s	---	---	---	---	4	1	"	9	10	40	00	360	00	o	m	---	"	---	---
"	1150	25	"	"	Ireland	---	m	1	---	---	---	1	2	"	12	10	40	00	480	00	o	m	100	"	---	---
"	1151	21	"	"	England	---	s	---	---	---	---	5	5	"	12	10	39	00	468	00	o	m	50	"	---	---
Trammer	1152	20	Austria	Austria	Austria	1	s	---	---	---	---	1	1	"	12	10	53	00	636	00	o	m	---	farmer	40 00	per yr
"	1153	27	"	"	"	4	s	---	---	---	---	4	4	"	12	10	53	00	636	00	o	m	200	"	40 00	"
"	1154	40	Poland	Poland	Poland	10	m	5	1	6	---	---	3	"	12	10	47	00	544	00	o	m	---	"	4 00	per mo
"	1155	33	"	"	"	3	m	6	2	6	---	---	5	"	12	10	52	00	624	00	o	m	---	"	26 00	per yr
Machinist	1156	25	U. S.	U. S.	U. S.	---	s	---	---	---	---	5	5	"	12	10	50	00	600	00	o	m	125	"	---	---
"	1157	25	Wales	Wales	Wales	25	s	---	---	---	---	6	6	"	12	10	60	00	720	00	o	m	200	"	---	---
"	1158	22	"	"	"	16	s	---	---	---	---	5	5	"	12	10	60	00	720	00	o	m	225	"	---	---
Drill boy	1159	14	Norway	Norway	Norway	---	s	---	---	---	---	2	2	"	12	10	32	00	384	00	o	m	---	"	---	---
"	1160	16	Finland	Finland	Finland	5	s	---	---	---	---	1	1	"	12	10	33	00	384	00	o	m	---	"	---	---
Miner	1161	25	U. S.	U. S.	U. S.	---	s	---	---	---	---	10	7	"	12	10	48	00	576	00	o	m	185	"	---	---
"	1162	25	England	England	England	23	s	---	---	---	---	8	8	"	13	10	43	00	576	00	o	m	175	miner	15 00	per mo
"	1163	30	"	"	"	8	s	---	---	---	---	15	8	"	13	10	40	00	490	00	o	m	225	"	20 00	"
"	1164	40	"	"	"	20	m	2	2	3	---	---	10	"	13	10	65	00	661	00	o	m	200	"	16 00	"
"	1165	20	"	"	"	8	s	---	---	---	---	10	8	"	12	10	48	00	576	00	o	m	200	"	---	---
"	1166	42	"	"	"	15	m	8	2	4	---	---	16	"	12	10	55	00	660	00	o	m	100	"	20 00	"
"	1167	27	"	"	"	11	s	---	---	---	---	13	11	"	12	10	55	00	640	00	o	m	200	"	15 00	"
"	1168	34	"	"	"	14	m	4	2	5	---	---	14	"	12	10	55	00	660	00	o	m	---	"	20 00	"
"	1169	25	"	"	"	4	s	---	---	---	---	4	4	"	12	10	48	00	576	00	o	m	---	engineer	20 00	"
"	1170	54	"	"	"	24	m	3	---	---	---	40	17	"	12	10	48	00	576	00	o	m	140	miner	16 00	"

* Father takes his wages.

†)Refused.

LABOR AND INDUSTRIAL STATISTICS.

TABLE NO. 7.—Continued.

Occupation.	Line number.	How many hours for a day's work in the old country.	Amount of money at interest or in the bank.	If foreign born, how much money did you have on arrival in U. S.	Do you own your home. If so, its value.	If mortgaged, amount of mortgage.	Rate of interest.	Are you as well off as five years ago.	Loss of time.			If renting home, monthly rental.	If boarding, cost per week, including room.	Life insurance, how much.	Do you belong to a benevolent society.	Weekly benefit in case of sickness or accident.	Have you a sewing machine.	Have you a piano.	Have you an organ.	Do you take a newspaper.			State of health then.	State of health now.	Amount of relief rendered friends in the old country.	Amount of money furnished to friends for passage to U. S.
									From sickness.—(Days.)	Inability to obtain work.—(Days.)	Causes not stated.—(Days.)									Daily.	Weekly.	Monthly.					Age began work.
Tramrer	1003	12	+	\$15	no			yes				\$4 00			yes	6 00	no	no	no	no	no	no	11	good	\$100	
"	1004	14	+	18	"			"				4 00			"	6 00	"	"	"	"	"	"	11	"	100	
"	1005	12	+	9	"			"				4 50			"	6 00	"	"	"	"	"	"	11	"	200	
"	1006	12	+		"			"				4 00			"	6 00	yes	"	"	"	"	"	12	"	200	
"	1007	12	+	30	"			"				4 00			"	6 00	no	"	"	"	"	"	12	"		
Laborer	098		+		"			"				4 00			"	6 00	"	"	"	"	"	"	16	"		
"	1009				"			"			\$2 00				"	6 00	"	"	"	"	"	"	15	"		
"	1100				"			"							"	6 00	"	"	"	"	"	"	17	"		
"	1101				"			yes				4 50			"	6 00	"	"	"	"	"	"	15	"		
"	1102		+		"										"	6 00	"	"	"	"	"	"	16	"		
"	1103		+		"			"				5 00			"	6 00	"	"	"	"	"	"	16	"		
"	1104		+		"			"				4 00			"	6 00	"	"	"	"	"	"	15	"		
"	1105	12	+	10	"			yes				4 00			"	6 00	"	"	"	"	"	"	15	"	100	
"	1106	10	+	13	"			"				4 50			"	6 00	"	"	"	"	"	"	20	"	50	
"	1107	14	+		"			"				4 00			"	6 00	"	"	"	"	"	"	10	"		
Carpenter	1108		+		\$1,000			"							"	6 00	yes	"	"	"	yes	20	"			
"	1109	12	+	20	700			"						\$1,000	6 00	yes	"	"	"	"	no	15	"			
"	1110		+		900			"							6 00	"	"	"	"	"	"	"	14	"		
Blacksmith	1111		+		no			yes			8 00			1,000	6 00	no	yes	"	"	"	"	"	16	"	100	
"	1112	10	+	16	"			"			4 00				6 00	yes	"	"	"	"	"	"	14	"		
"	1113		+					"							6 00	"	"	"	"	"	"	"	14	"		
Miner	1114	10	+		"			"				4 50			"	6 00	no	"	"	"	"	"	18	"		
"	1115	13	+		"			"				4 00			"	6 00	"	"	"	"	"	"	12	"		
"	1116		+		\$2,500			"							6 00	yes	"	"	"	yes	"	"	18	"		
"	1117	12	+	12	600			"			2 50				6 00	"	"	"	"	no	"	"	13	"		
"	1118	12	+		no			"							6 00	no	"	"	"	"	"	"	12	"		
"	1119	10	+	12	1,300			"							6 00	yes	"	"	"	"	"	"	14	"	20	
"			+					"										"	"	"	"	"	"			
"	1120	12	+	12	no			"			8 00			1,000	"	6 00	"	"	"	"	"	"	18	"	96	
"	1121	8	+	76	1,000			"							6 00	no	"	"	"	"	"	"	10	"		
"	1122	8	+	6	700			"							6 00	yes	"	"	"	"	"	"	18	"		
"	1123	8	+		500			"							6 00	"	"	"	"	"	"	"	8	"	50	
"	1124	8	+		no			"				4 75			6 00	no	"	"	"	"	"	"	10	"		
"	1125	8	+					"				4 50			6 00	"	"	"	"	"	"	"	10	"		

"	1126	8	†	85	"	156	4 50	8 00	4 50	1,000	6 00	yes	"	yes	"	10	"	200	...
"	1127	...	†	...	"	...	4 50	...	4 50	...	6 00	no	"	no	"	18	"	...	...
"	1128	...	†	...	"	...	4 50	...	4 50	...	6 00	yes	"	yes	"	18	"	...	...
"	1129	...	†	...	"	...	4 50	...	4 50	...	6 00	yes	"	yes	"	17	"	...	...
Watchman	1130	10	†	35	"	...	...	8 00	...	...	6 00	yes	"	yes	"	16	"	...	...
Mine laborer	1131	12	†	13	"	...	...	...	...	...	6 00	no	"	no	"	18	"	300	...
Timberman helper	1132	14	†	30	"	...	...	5 00	...	...	6 00	yes	"	yes	"	11	"	...	...
Mason	1133	10	†	†	"	...	...	8 00	...	1,000	6 00	yes	"	yes	"	16	"	...	...
Lander	1134	14	†	25	"	...	...	8 00	...	...	6 00	yes	"	yes	"	8	"	...	...
Engineer	1135	8	†	25	"	...	...	...	...	...	6 00	yes	"	yes	"	...	"	...	...
Drill boy	1136	...	†	...	"	156	...	3 00	...	...	6 00	no	"	no	"	...	"	...	...
Laborer	1137	10	†	...	"	...	...	...	...	...	6 00	yes	"	yes	"	...	"	...	...
"	1138	12	†	8	"	...	...	2 00	...	...	6 00	yes	"	yes	"	16	"	...	...
"	1139	14	†	...	"	...	...	3 00	...	...	6 00	yes	"	yes	"	12	"	...	...
"	1140	...	†	7	"	...	...	...	...	...	6 00	yes	"	yes	"	12	"	...	...
"	1141	12	†	10	"	156	...	2 00	...	...	6 00	yes	"	yes	"	12	"	...	...
"	1142	8	†	...	"	...	...	...	...	...	6 00	yes	"	yes	"	8	"	...	...
"	1143	12	†	30	"	...	...	...	...	...	6 00	yes	"	yes	"	12	"	125	...
"	1144	12	†	11	"	...	...	...	4 50	...	6 00	no	"	no	"	9	"	200	...
"	1145	13	†	14	"	...	...	...	4 50	...	6 00	yes	"	yes	"	11	"	...	...
"	1146	12	†	...	"	...	...	...	...	...	6 00	yes	"	yes	"	10	"	...	...
"	1147	12	†	...	"	...	...	4 50	...	...	6 00	no	"	no	"	11	"	...	...
"	1148	10	†	10	"	...	...	...	4 50	...	6 00	yes	"	yes	"	16	"	100	...
"	1149	...	†	...	"	78	...	...	4 50	...	6 00	yes	"	yes	"	18	"	...	...
"	1150	...	†	...	"	...	...	6 00	...	...	6 00	yes	"	yes	"	15	"	...	...
"	1151	...	†	...	"	...	...	...	...	...	6 00	yes	"	yes	"	...	"	...	...
Tramner	1152	12	†	...	"	...	...	...	4 50	...	6 00	no	"	no	"	16	"	...	...
"	1153	12	†	10	"	...	...	...	4 50	...	6 00	yes	"	yes	"	11	"	...	...
"	1154	14	†	†	"	...	...	3 50	...	1,000	6 00	yes	"	yes	"	12	"	150	...
"	1155	12	†	...	"	...	...	...	...	...	6 00	yes	"	yes	"	12	"	...	...
Machinist	1156	...	†	...	"	...	...	...	4 50	...	6 00	yes	"	yes	"	16	"	...	...
"	1157	...	†	...	"	...	...	...	4 50	...	6 00	yes	"	yes	"	19	"	...	...
"	1158	...	†	...	"	...	...	...	4 50	...	6 00	yes	"	yes	"	17	"	...	...
Drill boy	1159	...	†	...	"	...	...	...	...	...	6 00	yes	"	yes	"	17	"	...	...
"	1160	...	†	...	"	...	...	...	...	...	6 00	yes	"	yes	"	15	"	...	...
"	1161	...	†	...	"	...	...	...	...	...	6 00	yes	"	yes	"	...	"	...	...
Miner	1162	...	†	...	"	...	...	...	5 00	1,000	6 00	yes	"	yes	"	16	"	...	...
"	1163	8	†	†	"	...	...	...	5 00	...	6 00	yes	"	yes	"	17	"	...	...
"	1164	8	†	†	"	...	...	4 00	4 50	...	6 00	yes	"	yes	"	16	"	...	...
"	1165	8	†	13	"	...	...	...	4 75	...	6 00	yes	"	yes	"	16	"	...	...
"	1166	8	†	...	"	...	...	...	...	...	6 00	yes	"	yes	"	10	"	...	...
"	1167	8	†	†	"	...	...	...	5 00	...	6 00	yes	"	yes	"	12	"	200	...
"	1168	8	†	†	"	...	...	...	...	...	6 00	yes	"	yes	"	14	"	100	...
"	1169	10	†	13	"	...	...	...	5 00	...	6 00	yes	"	yes	"	14	"	100	...
"	1170	8	†	†	"	...	...	4 50	...	...	6 00	yes	"	yes	"	16	"	700	...

† Refused.

TABLE No. 7.—Continued.

Occupation.	Line number.	Age.	Nativity.	Nativity of parents.	How long in U. S., if foreign born.—(Years.)	Married or single.	How many children in family.	How many attend school.	How many depend on you for support.	How many years at present occupation.	How long with present employer.—(Years.)	Number of months employed during year.	How many hours for a day's work.	Wages paid.	Annual earnings.	Are you paid cash or trade.	How often are you paid.	Amount saved during the year.	How do wages compare with former years in this country.	What occupation did you follow in the old country.	Wages received in the old country.
Miner.....	1171 41	Finland.....	Finland.....	Finland.....	16	m	6	2	7	16	16 yrs	12	10	\$48 00 pr m	\$576 00	c	m	\$100	same	farmer	\$30 00 per year
".....	1172 41	Norway.....	Norway.....	Norway.....	18	m	2	1	3	18	18	12	10	55 00 "	660 00	c	m	150	"	miner	10 00 per mo
Blacksmith.....	1173 42	Canada.....	Canada.....	Canada.....	14	m	3	1	4	14	14	12	10	50 00 "	600 00	c	m	200	"	farmer	10 00 "
".....	1174 42	".....	".....	".....	7	s	...	...	...	7	7	12	10	65 00 "	780 00	c	m	200	"	laborer	18 00 "
Carpenter.....	1175 39	".....	".....	".....	24	s	...	...	...	7	7	12	10	50 00 "	600 00	c	m	200	"	...	...
".....	1176 48	Germany.....	Germany.....	Germany.....	23	m	10	3	7	18	18	12	10	54 00 "	648 00	c	m	...	higher	carpenter	18 00 per mo
Engineer.....	1177 37	U. S.....	U. S.....	Canada.....	...	m	4	1	5	5	11	12	10	75 00 "	900 00	c	m	225	same	engineer	20 00 per mo
".....	1178 32	England.....	England.....	England.....	7	m	3	3	4	17	17	12	10	70 00 "	840 00	c	m	210	less	machinist	20 00 "
Lander.....	1179 39	Germany.....	Germany.....	Germany.....	19	m	6	1	6	13	18	12	10	54 00 "	648 00	c	m	150	same	laborer	25 00 "
Teamster.....	1180 25	Canada.....	Canada.....	Canada.....	5	s	...	...	...	5	5	12	10	47 00 "	564 00	c	m	150	"	...	...
".....	1181 35	U. S.....	U. S.....	".....	...	s	...	...	...	15	8	12	10	60 00 "	720 00	c	m	210	"	...	...
Machinist.....	1182 37	Germany.....	Germany.....	Germany.....	25	m	4	2	5	4	6	12	10	54 00 "	648 00	c	m	150	"	...	...
Brakeman.....	1183 17	Canada.....	Canada.....	Canada.....	1	s	...	...	...	1	1	12	10	45 00 "	540 00	c	m	...	same	...	...
Brass molder.....	1184 27	U. S.....	U. S.....	Germany.....	...	m	2	...	3	9	8	12	10	56 00 "	672 00	c	m	100	"	...	...
Fireman.....	1185 25	".....	".....	U. S.....	...	s	...	...	...	5	5	12	10	52 00 "	624 00	c	m	...	"	...	...
Painter.....	1186 25	".....	".....	".....	...	s	...	...	...	1	1	12	10	36 00 "	432 00	c	m	...	"	...	...
".....	1187 14	".....	".....	Norway.....	...	s	...	...	...	1	1	12	10	32 00 "	384 00	c	m	150	"	miner	15 00 per mo
Laborer.....	1188 27	England.....	England.....	England.....	...	m	...	...	1	1	1	12	8	47 00 "	564 00	c	m	...	"	farmer	refused
".....	1189 33	Finland.....	Finland.....	Finland.....	1	s	...	...	...	5	4	12	10	39 00 "	468 00	c	m	...	same	"	refused
".....	1190 23	".....	".....	".....	6	s	...	...	...	8	3	12	10	39 00 "	468 00	c	m	100	"	laborer	refused
".....	1191 30	".....	".....	".....	8	s	...	...	...	8	3	12	10	45 00 "	540 00	c	m	...	"	...	...
".....	1192 28	".....	".....	".....	1	m	...	...	1	1	1	12	10	36 00 "	432 00	c	m	...	"	...	...
Mason.....	1193 45	Germany.....	Germany.....	Germany.....	25	m	1	...	2	20	10	12	10	65 00 "	780 00	c	m	...	same	mason	20 00 per mo
Mine capt.....	1194 41	Scotland.....	Scotland.....	Scotland.....	30	m	8	1	3	20	20	12	4	50 00 "	6,000 00	c	m	+	"	miner	20 00 "
Surface boss.....	1195 45	".....	".....	".....	30	m	4	...	2	20	20	12	10	100 00 "	1,200 00	c	m	+	"	not answ'd	20 00 "
Engineer.....	1196 30	".....	".....	".....	5	s	...	...	...	10	10	12	10	100 00 "	1,200 00	c	m	900	better	...	not answered
".....	1197 40	England.....	England.....	England.....	37	m	4	4	5	25	18	12	10	57 00 "	684 00	c	m	125	same	...	...
".....	1198 23	U. S.....	U. S.....	U. S.....	...	s	...	...	2	1	1	12	10	85 00 "	1,020 00	c	m	400	better	...	...
Fireman.....	1199 20	".....	".....	England.....	...	s	...	...	...	2	2	12	10	56 00 "	672 00	c	m	300	same	...	...
".....	1200 22	".....	".....	England.....	...	s	...	...	...	1	1	12	10	56 00 "	672 00	c	m	200	"	miner	20 00 per mo
".....	1201 15	Norway.....	Norway.....	Finland.....	22	m	3	2	4	7	7	12	12	40 00 "	480 00	c	m	...	less	farmer	40 00 per year
Mine laborer.....	1202 38	Austria.....	Austria.....	Austria.....	2	m	...	...	...	3	3	12	10	48 00 "	576 00	c	m	225	same	not answ'd	not answered
Car filler.....	1203 28	Finland.....	Finland.....	Finland.....	6	m	3	1	...	2	2	12	10	50 00 "	600 00	c	m	100	"	carpenter	25 00 per mo
Carpenter.....	1204 40	".....	".....	Sweden.....	8	m	1	16	4	12	10	50 00 "	600 00	c	m	100	"

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Carpenter.....	1904 46	Finland.....	8	s	16	5	11	7	10	54	00	...	578	00	c	m	50	same	carpenter	25 00
".....	1905 23	England.....	...	s	...	...	5	11	12	12	10	45	00	...	540	00	c	m	200	same	"	15 00
Timberman.....	1906 86	Finland.....	2	m	...	...	8	2	9	9	10	48	00	...	468	00	c	m	...	not ans'd	laborer	40 00 per year
Tramman.....	1907 85	Sweden.....	2	m	...	...	8	3	12	12	8	53	00	...	636	00	c	m	...	less	peddler	40 00
Machinist.....	1908 42	U. S.....	...	m	...	...	8	2	12	12	10	45	00	...	540	00	c	m	...	same	"	...
Mine clerk.....	1909 46	".....	...	m	...	...	1	20	12	12	8	66	65	...	2,000	00	c	m	+	same	"	...
Supply clerk.....	1910 28	England.....	16	s	...	...	2	8	12	12	10	50	00	...	600	00	c	m	200	"	farmer	12 50 per mo
".....	1911 42	Ireland.....	25	m	...	...	2	12	12	12	10	55	00	...	660	00	c	m	400	less	"	...
Miner.....	1912 18	U. S.....	...	s	...	...	...	8	12	12	10	48	00	...	576	00	c	m	+	higher	"	...
".....	1913 54	Ireland.....	34	m	...	...	...	24	1	12	10	48	00	...	576	00	c	m	150	same	"	...
".....	1914 25	England.....	7	m	...	...	4	10	1	12	10	48	00	...	576	00	c	m	100	less	miner	15 00 per mo
".....	1915 26	".....	7	m	...	...	2	12	4	12	10	48	00	...	576	00	c	m	125	"	"	not answered
".....	1916 31	".....	20	m	...	...	7	19	2	12	10	55	00	...	660	00	c	m	150	same	"	...
".....	1917 30	".....	1	m	...	...	1	15	1	12	10	55	00	...	660	00	c	m	200	"	miner	15 00 per mo
".....	1918 26	".....	6	s	...	...	...	16	4	12	10	55	00	...	660	00	c	m	300	"	"	15 00
".....	1919 22	Norway.....	8	s	...	...	...	6	2	11	10	36	00	...	423	00	c	m	...	"	"	...
".....	1920 45	".....	22	m	...	...	7	29	20	12	10	48	00	...	576	00	c	m	...	"	miner	20 00 per mo
".....	1921 29	".....	7	m	...	...	1	13	4	12	10	50	00	...	600	00	c	m	100	"	"	20 00
".....	1922 33	".....	7	m	...	...	6	16	4	12	10	50	00	...	600	00	c	m	...	"	"	20 00
".....	1923 42	Finland.....	16	m	...	...	7	25	5	11	10	50	00	...	587	50	c	m	+	"	"	16 00
".....	1924 41	Finland.....	4	m	...	...	...	1	1	12	10	48	00	...	576	00	c	m	200	"	farmer	+
".....	1925 42	".....	7	m	...	...	6	6	2	12	10	50	00	...	600	00	c	m	+	"	"	+
".....	1926 11	".....	16	m	...	...	7	16	15	11	10	50	00	...	550	00	c	m	...	"	fisherman	+
".....	1927 38	Sweden.....	15	m	...	...	4	20	15	12	10	50	00	...	600	00	c	m	50	"	miner	18 00 per mo
".....	1928 43	".....	16	m	...	...	7	15	15	12	10	50	00	...	600	00	c	m	+	"	fisherman	not answered
".....	1929 25	Sweden.....	7	s	...	...	...	7	7	12	10	55	00	...	660	00	c	m	250	"	farmer	200 00 per year
".....	1930 37	".....	15	m	...	...	...	24	15	12	10	50	00	...	600	00	c	m	...	"	miner	14 00 per mo
".....	1931 42	Norway.....	8	m	...	...	...	25	4	11	10	40	00	...	460	00	c	m	...	"	"	20 00
".....	1932 38	".....	19	m	...	...	5	23	4	11	10	60	00	...	600	00	c	m	100	"	"	16 00
".....	1933 36	".....	17	m	...	...	4	19	13	12	10	50	00	...	600	00	c	m	50	"	"	16 00
".....	1934 43	".....	18	m	...	...	5	16	14	12	10	50	00	...	600	00	c	m	...	less	farmer	+
Fireman.....	1935 23	U. S.....	...	m	...	...	...	1	1	12	10	54	00	...	648	00	c	m	150	not ans'd	"	...
Machinist helper.....	1936 19	England.....	...	s	...	...	...	4	4	12	10	35	00	...	420	00	c	m	...	"	"	...
Plumber.....	1937 21	Scotland.....	...	s	...	...	...	5	5	12	10	60	00	...	720	50	c	m	...	same	"	...
Watchman.....	1938 52	Scotland.....	37	m	...	...	9	14	14	12	10	53	00	...	696	00	c	m	+	not ans'd	farming	not answered
Tramman.....	1939 23	Ireland.....	5	s	...	...	...	5	5	6	10	50	00	...	300	00	c	m	...	same	"	...
Drill boy.....	1940 20	Sweden.....	7	s	...	...	...	5	5	12	10	33	00	...	396	00	c	m	...	"	"	...
Oiler.....	1941 16	".....	7	s	...	...	...	1	1	1	12	33	00	...	33	00	c	m	...	"	"	...
Vault cleaner.....	1942 56	England.....	83	m	...	...	...	22	22	12	10	100	00	...	1,200	60	c	m	+	not ans'd	miner	15 00 per mo
Brakeman.....	1943 23	".....	20	s	...	...	7	7	7	12	10	50	00	...	600	00	c	m	+	"	"	...
Assistant clerk.....	1944 25	".....	17	s	...	...	...	4	4	12	10	45	00	...	540	00	c	m	...	"	blacksmith	not answered
Blacksmith.....	1945 37	".....	16	m	...	...	...	16	16	12	10	57	00	...	644	00	c	m	...	less	carpenter	"
Carpenter.....	1946 43	Germany.....	8	m	...	...	5	4	6	12	10	65	00	...	780	00	c	m	200	not ans'd	wheelwright	...
".....	1947 34	Canada.....	8	m	...	...	...	4	4	12	10	52	00	...	624	00	c	m	...	"	"	...
Engineer.....	1948 20	U. S.....	...	s	...	...	...	2	2	11	10	30	00	...	337	50	c	m	...	same	"	...

*** Father takes his wages.**

+ Refused.

TABLE No. 7.—Continued.

Occupation.	Line number.	Age.	Native.	Native of parents.	How long in U. S., if foreign born.—(Years.)	Married or single.	How many children in family.	How many attend school.	How many depend on you for support.	How many years at present occupation.	How long with present employer.—(Years.)	Number of months employed during year.	How many hours for a day's work.	Wages paid.	Annual earnings.	Are you paid cash or trade.	How often are you paid.	Amount saved during the year.	How do wages compare with former years in this country.	What occupation did you follow in the old country.	Wages received in the old country.
Miner.....	1171 41	Finland.....	Finland.....	Finland.....	16	m	6	2	7	16	16 yrs	12	10	\$48 00 pr m	\$576 00	c	m	\$100	same	farmer	\$30 00 per year
"	1172 31	Norway.....	Norway.....	Norway.....	18	m	2	1	3	18	18	12	10	55 00	660 00	c	m	150	"	miner	10 00 per mo
Blacksmith.....	1173 42	Canada.....	Canada.....	Canada.....	14	m	3	1	4	14	14	12	10	60 00	720 00	c	m	200	"	farmer	10 00 "
"	1174 27	"	"	"	7	s	—	—	—	7	7	12	10	65 00	780 00	c	m	800	"	laborer	13 00 "
Carpenter.....	1175 29	"	"	"	24	s	—	—	—	7	7	12	10	50 00	600 00	c	m	200	"	"	"
"	1176 43	Germany.....	Germany.....	Germany.....	23	m	10	3	7	18	18	12	10	54 00	648 00	c	m	—	higher	carpenter	18 00 per mo
Engineer.....	1177 37	U. S.....	U. S.....	Canada.....	—	m	4	1	5	5	11	12	10	75 00	900 00	c	m	225	"	"	"
"	1178 32	England.....	England.....	England.....	7	m	3	3	4	17	7	12	10	70 00	840 00	c	m	210	same	engineer	20 00 per mo
Lander.....	1179 39	Germany.....	Germany.....	Germany.....	19	m	6	1	6	15	18	12	10	54 00	648 00	c	m	150	less	machinist	20 00 "
Teamster.....	1180 25	Canada.....	Canada.....	Canada.....	5	s	—	—	—	9	5	12	10	47 00	564 00	c	m	150	same	laborer	23 00 "
Machinist.....	1181 35	U. S.....	U. S.....	"	—	s	—	—	—	15	8	12	10	60 00	720 00	c	m	210	"	"	"
Brakeman.....	1182 37	Germany.....	Germany.....	Germany.....	25	m	4	2	—	4	5	12	10	54 00	648 00	c	m	150	"	"	"
Brass molder.....	1183 17	Canada.....	Canada.....	Canada.....	1	s	—	—	—	1	1	12	10	45 00	540 00	c	m	—	"	"	"
Fireman.....	1184 27	U. S.....	U. S.....	Germany.....	—	m	2	—	3	9	8	12	10	56 00	672 00	c	m	—	same	"	"
Painter.....	1185 26	"	"	U. S.....	—	s	—	—	—	9	5	12	10	52 00	624 00	c	m	100	"	"	"
"	1186 14	"	"	"	—	s	—	—	—	1	1	12	10	32 00	384 00	c	m	—	"	"	"
Laborer.....	1187 27	England.....	England.....	Norway.....	—	m	—	—	—	1	1	12	8	47 00	564 00	c	m	150	"	miner	15 00 per mo
"	1188 33	Finland.....	Finland.....	Finland.....	1	s	—	—	—	1	1	12	10	39 00	468 00	c	m	—	"	farmer	refused
"	1189 33	"	"	"	5	s	—	—	—	9	4	12	10	39 00	468 00	c	m	—	same	"	refused
"	1190 30	"	"	"	8	s	—	—	—	8	8	12	10	45 00	540 00	c	m	100	"	laborer	"
"	1191 28	"	"	"	1	m	—	—	—	1	1	12	10	36 00	432 00	c	m	—	"	"	"
"	1192 45	Germany.....	Germany.....	Germany.....	26	m	1	—	2	30	10	12	10	65 00	780 00	c	m	—	same	mason	20 00 per mo
Mine capt.....	1193 61	Scotland.....	Scotland.....	Scotland.....	30	m	8	1	3	20	20	12	4	50 00	600 00	c	m	+	"	miner	20 00 "
Surface boss.....	1194 65	"	"	"	30	m	4	—	2	20	20	12	10	100 00	1,200 00	c	m	+	"	"	"
Engineer.....	1195 30	"	"	"	5	s	—	—	—	10	10	12	10	100 00	1,200 00	c	m	900	better	not ans'w'd	not answered
"	1196 40	England.....	England.....	England.....	37	m	4	4	5	25	18	12	10	67 00	804 00	c	m	125	same	"	"
"	1197 26	U. S.....	U. S.....	U. S.....	—	s	—	—	2	1	1	12	10	85 00	1,020 00	c	m	400	better	"	"
Fireman.....	1198 20	"	"	England.....	—	s	—	—	—	2	2	12	10	56 00	672 00	c	m	200	same	"	"
"	1199 22	"	"	England.....	—	s	—	—	—	1	1	12	10	56 00	672 00	c	m	200	less	miner	20 00 per mo
"	1200 15	Norway.....	Norway.....	Finland.....	22	m	3	2	4	7	7	12	12	40 00	480 00	c	m	225	same	farmer	40 00 per year
Mine laborer.....	1201 38	Austria.....	Austria.....	Austria.....	2	m	—	—	—	8	8	12	10	48 00	576 00	c	m	100	"	not ans'w'd	not answered
Car filler.....	1202 28	Finland.....	Finland.....	Finland.....	6	m	3	1	4	2	5	12	10	50 00	600 00	c	m	100	"	carpenter	26 00 per mo
Carpenter.....	1203 40	"	"	Sweden.....	8	m	—	—	1	16	4	12	10	50 00	600 00	c	m	100	"	"	"

Carpenter.....	1204 46	Finland.....	Finland.....	8	s	...	...	...	...	16	5	11	7	10	54 00	"	878 00	c	m	50	same	carpenter	25 00	"
Timberman.....	1205 23	England.....	England.....	2	s	...	...	...	...	5	11	12	12	10	45 00	"	540 00	c	m	200	same	laborer	15 00	"
Tramman.....	1206 36	Finland.....	Finland.....	2	m	...	...	...	...	8	2	9	9	10	48 00	"	468 00	c	m	...	not ans'd	peddler	40 00 per year	"
Machinist.....	1207 35	Sweden.....	Sweden.....	2	m	...	...	...	...	8	2	12	12	8	53 00	"	636 00	c	m	...	less	...	40 00	"
	1208 42	U. S.....	England.....	...	m	...	...	...	...	3	2	13	13	10	45 00	"	540 00	c	m	...	higher	...	...	...
Mine clerk.....	1209 46	"	U. S.....	...	m	...	...	...	...	1	20	12	12	8	66 65	"	2,000 00	c	m	+	same	...	...	...
Supply clerk.....	1210 28	England.....	England.....	16	s	...	...	...	...	2	8	12	12	10	50 00	"	600 00	c	m	200	"	...	...	...
"	1211 42	Ireland.....	Ireland.....	25	m	...	...	...	...	2	12	12	12	10	55 00	"	660 00	c	m	400	"	farmer	12 50 per mo	"
Miner.....	1212 18	U. S.....	U. S.....	...	s	...	...	...	...	...	3	12	12	10	48 00	"	576 00	c	m	+	less	...	...	...
"	1213 54	Ireland.....	Ireland.....	34	m	...	...	...	...	3	24	12	12	10	48 00	"	576 00	c	m	150	higher	...	...	...
"	1214 25	England.....	England.....	7	m	...	...	...	...	4	10	12	12	10	48 00	"	576 00	c	m	100	less	miner	15 00 per mo	"
"	1215 26	"	"	7	m	...	...	...	...	2	12	12	12	10	48 00	"	576 00	c	m	125	"	"	not answered	"
"	1216 31	"	"	20	m	...	...	...	...	7	19	12	12	10	55 00	"	660 00	c	m	150	same	"	...	...
"	1217 30	"	"	1	m	...	...	...	...	1	15	12	12	10	55 00	"	660 00	c	m	200	"	miner	15 00 per mo	"
"	1218 26	"	"	6	s	...	...	...	...	...	16	12	12	10	55 00	"	660 00	c	m	300	"	"	15 00	"
"	1219 22	Norway.....	Norway.....	8	s	...	...	...	...	...	6	11	11	10	36 00	"	428 00	c	m	...	"	...	...	...
"	1220 45	"	"	22	m	...	...	...	...	7	29	12	12	10	48 00	"	576 00	c	m	...	"	miner	20 00 per mo	"
"	1221 29	"	"	7	m	...	...	...	...	1	13	12	12	10	50 00	"	600 00	c	m	100	"	"	20 00	"
"	1222 33	"	"	7	m	...	...	...	...	6	16	12	12	10	50 00	"	600 00	c	m	...	"	"	20 00	"
"	1223 42	Finland.....	Finland.....	16	m	...	...	...	...	8	25	11	11	10	50 00	"	587 50	c	m	+	"	"	18 00	"
"	1224 41	Finland.....	Finland.....	4	m	...	...	...	...	5	1	12	12	10	48 00	"	576 00	c	m	200	"	farmer	+	"
"	1225 42	"	"	7	m	...	...	...	...	7	6	12	12	10	50 00	"	600 00	c	m	+	"	fisherman	+	"
"	1226 41	"	"	16	m	...	...	...	...	7	16	11	11	10	50 00	"	550 00	c	m	...	"	miner	18 00 per mo	"
"	1227 38	Sweden.....	Sweden.....	15	m	...	...	...	...	4	20	12	12	10	50 00	"	600 00	c	m	50	"	fisherman	not answered	"
"	1228 43	"	"	16	m	...	...	...	...	7	15	12	12	10	50 00	"	600 00	c	m	+	"	...	...	...
"	1229 25	"	Sweden.....	7	s	...	...	...	...	...	7	12	12	10	55 00	"	660 00	c	m	250	"	farmer	20 00 per year	"
"	1230 37	"	"	15	m	...	...	...	...	...	24	13	13	10	50 00	"	600 00	c	m	...	"	miner	14 00 per mo	"
"	1231 42	Norway.....	Norway.....	8	m	...	...	...	...	6	25	11	11	10	40 00	"	460 00	c	m	...	"	"	20 00	"
"	1232 38	"	"	19	m	...	...	...	...	7	24	12	12	10	50 00	"	600 00	c	m	100	"	"	16 00	"
"	1233 36	"	"	17	m	...	...	...	...	4	19	12	12	10	50 00	"	600 00	c	m	50	"	"	16 00	"
"	1234 43	"	"	18	m	...	...	...	...	3	16	12	12	10	50 00	"	600 00	c	m	...	less	farmer	+	"
Fireman.....	1235 23	U. S.....	England.....	...	m	...	...	...	...	1	1	12	12	10	54 00	"	648 00	c	m	150	not ans'd	...	...	...
Machinist helper.....	1236 19	"	"	...	s	...	...	...	...	...	4	12	12	10	35 00	"	420 00	c	m	...	same	...	...	...
Plumber.....	1237 21	"	Scotland.....	...	s	...	...	...	...	...	5	12	12	10	60 00	"	720 50	c	m	300	not ans'd	...	...	...
Watchman.....	1238 52	Scotland.....	Scotland.....	37	m	...	...	...	...	9	14	12	12	10	53 00	"	636 00	c	m	+	...	farming	not answered	"
Tramman.....	1239 23	Ireland.....	Ireland.....	5	s	...	...	...	...	...	5	6	6	10	50 00	"	300 00	c	m	...	same	...	...	...
Drill boy.....	1240 20	Sweden.....	Sweden.....	7	s	...	...	...	...	...	5	12	12	10	33 00	"	396 00	c	m	...	"	...	...	...
Officer.....	1241 16	"	"	7	s	...	...	...	...	...	1	1	1	12	33 00	"	33 00	c	m	...	"	...	...	...
Vault cleaner.....	1242 56	England.....	England.....	83	m	...	...	...	...	...	22	12	12	10	100 00	"	1,200 00	c	m	+	not ans'd	miner	15 00 per mo	"
Brakeman.....	1243 23	"	"	20	s	...	...	...	...	...	7	12	12	10	50 00	"	600 00	c	m	+	...	...	...	...
Assistant clerk.....	1244 25	"	"	17	s	...	...	...	...	...	4	12	12	10	45 00	"	540 00	c	m	...	"	blacksmith	not answered	"
Blacksmith.....	1245 37	"	"	16	m	...	...	...	...	...	16	12	12	10	57 00	"	640 00	c	m	...	less	carpenter	"	"
Carpenter.....	1246 43	Germany.....	Germany.....	8	m	...	...	...	...	4	5	12	12	10	65 00	"	780 00	c	m	200	not ans'd	wheelwright	...	...
"	1247 34	Canada.....	Canada.....	8	m	...	...	...	...	4	8	12	12	10	52 00	"	624 00	c	m	...	same	...	...	...
Engineer.....	1248 20	U. S.....	Scotland.....	...	s	...	...	...	...	...	2	11	11	10	30 00	"	337 50	c	m	...	...	...	...	...

+ Refused.

* Father takes his wages.

TABLE NO. 7.—Continued.

Occupation.	Line number.	How many hours for a day's work in the old country.	Amount of money at interest or in the bank.	If foreign born, how much money did you have on arrival in U. S.	Do you own your home. If so, its value.	If mortgaged, amount of mortgage.	Rate of interest.	Are you as well off as five years ago.	Loss of time.			If renting home, monthly rental.	If boarding, cost per week, including room.	Life insurance, how much.	Do you belong to a benevolent society.	Weekly benefit in case of sickness or accident.	Have you a sewing machine.	Have you a piano.	Have you an organ.	Do you take a newspaper.			Age began work.	State of health then.	State of health now.	Amount of relief rendered friends in the old country.	Amount of money furnished to friends for passage to U. S.
									From sickness—	(Days.)	Inability to obtain work.—(Days.)	Causes not stated.—(Days.)								Daily.	Weekly.	Monthly.					
Miner	1171	12	++	10	\$300			yes							yes	\$6 00	no	no	no	yes	no	no	11	good	good		
Blacksmith	1172	10	++	20	500			"							"	6 00	yes	no	no	no	no	no	12	"	"		
"	1173	10	++	10	1,000			"							"	6 00	yes	no	no	no	no	no	12	"	"		
Carpenter	1174	10	++	18	no			"							"	6 00	no	no	no	no	no	no	14	"	"		
"	1175		++					"							"	6 00	no	no	no	no	no	no	14	"	"		
Engineer	1176	10	++	25	1,000			"							"	6 00	yes	no	yes	no	no	no	16	"	"		
"	1177	10	++		no			"							"	6 00	no	no	no	yes	no	no	15	"	"		
Lander	1178	10	++	+	"			"							"	6 00	no	no	no	no	no	no	16	"	"		
Teamster	1179	10	++	+	"			"							"	6 00	no	no	no	yes	yes	no	16	"	"		
"	1180	10	++	25	"			"							"	6 00	no	no	no	no	no	no	16	"	"		
Machinist	1181		++		"			"							"	6 00	no	no	no	no	no	no	20	"	"		
Brakeman	1182		++		"			"							"	6 00	yes	no	no	no	no	no	20	"	"		
Brass molder	1183		++		"			"							"	6 00	no	no	no	no	no	no	16	"	"		
Fireman	1184		++		"			"							"	6 00	yes	no	no	no	no	no	14	"	"		
Painter	1185		++		"			"							"	6 00	no	no	no	no	no	no	12	"	"		
Laborer	1186	8	+		"			yes							"	6 00	no	no	no	no	no	no	18	"	"		
"	1187		+	+	"			yes							"	6 00	no	no	no	no	no	no	18	"	"		
"	1188				"			"							"	6 00	no	no	no	no	no	no	12	"	"		
"	1189		500		"			yes							"	6 00	no	no	no	no	no	no	12	"	"		
"	1190	15		1	"			"							"	6 00	no	no	no	no	no	no	12	"	"		
"	1191				"			"							"	6 00	no	no	no	no	no	no	10	"	"		\$80
Mason	1192	12	+		1,000			"							"	6 00	no	yes	no	yes	no	no	14	"	poor		
Mine capt.	1193	8	+	100	no			"							"	40 00	yes	yes	no	yes	no	no	10	"	good		
Surface boss	1194	8	1,000	40	"			"							"	25 00	no	no	no	no	no	no	12	"	"		
Engineer	1195		2,000		"			"							"	10 00	yes	no	no	yes	no	no	20	"	"		
"	1196		+		"			"							"	6 00	yes	no	no	no	no	no	12	"	"		
"	1197		+		"			"							"	6 00	no	no	no	no	no	no	16	"	"		
Fireman	1198		+		"			yes							"	6 00	no	no	no	yes	no	no	18	"	"		
"	1199	8	400		500			"							"	6 00	no	no	no	no	no	no	18	"	"		
Mine laborer	1200	14	+	18	no			"							"	6 00	no	no	no	yes	no	no	15	"	poor		200
Car filler	1201				800			"							"	6 00	no	no	no	yes	no	no	15	"	good		200
"	1202				1,000			"							"	6 00	yes	no	no	no	no	no	16	"	poor		140
Carpenter	1203	14						"							"	6 00	yes	no	no	yes	yes	yes	16	"	poor		

SIXTH ANNUAL REPORT.

[illegible]

*** Reused.**

TABLE NO. 7.—Continued.

Occupation.	Line number.	Age.	Nativity.	Nativity of parents.	How long in U. S., if foreign born.—(Years.)	Married or single.	How many children in family.	How many attend school.	How many depend on you for support.	How many years at present occupation.	How long with present employer.—(Years.)	Number of months employed during year.	How many hours for a day's work.	Wages paid.	Annual earnings.	Are you paid cash or trade.	How often are you paid.	Amount saved during the year.	How do wages compare with former years in this country.	What occupation did you follow in the old country.	Wages received in the old country.
Engineer.....	1249	58	Scotland	Scotland	40	m	4	1	1	9	9 yrs	12	10	\$57 00 pr m	\$684 00	c	m	+	same	not answ'd mining	not answered
"	1250	56	England	England	20	m	7	3	5	2	2	12	10	50 00 "	640 00	c	m	+	not answ'd	not answ'd farming	\$5 00 per mo not answered
Teamster.....	1251	40	Sweden	Sweden	20	m	1	1	1	9	9	12	10	47 00 "	564 00	c	m	+	"	"	"
"	1252	35	Canada	"	...	m	1	1	2	16	15	12	10	47 00 "	664 00	c	m	+	"	"	"
"	1253	21	U. S.	"	...	m	2	...	3	4	4	12	10	47 00 "	564 00	c	m	+	"	"	"
Laborer.....	1254	50	Scotland	Scotland	30	m	5	3	6	20	20	12	11	53 00 "	636 00	c	m	+	same	cooper	not answered
"	1255	40	"	"	20	s	...	...	...	12	12	12	10	40 00 "	480 00	c	m	+	not answ'd	farming	"
"	1256	38	Canada	France	20	m	...	...	1	5	5	12	10	36 00 "	420 00	c	m	+	lower	not answ'd laborer	"
"	1257	26	"	Canada	6	m	4	1	4	8	8	12	10	40 00 "	480 00	c	m	+	same	farmer	"
"	1258	30	"	"	8	m	3	1	4	8	8	12	10	40 00 "	480 00	c	m	+	"	"	"
"	1259	40	Sweden	Sweden	8	m	1	1	2	8	8	12	10	25 00 "	420 00	c	m	+	not answ'd	not answ'd mining	15 00 per mo
"	1260	35	"	"	10	m	...	...	1	2	2	12	10	35 00 "	420 00	c	m	+	same	"	"
"	1261	21	Ireland	Ireland	3	s	...	...	...	3	3	11 1/2	10	50 00 "	575 00	c	m	+	not answ'd	"	"
"	1262	17	U. S.	Germany	...	s	...	...	...	1	1	12	10	26 00 "	312 00	c	m	+	"	"	"
"	1263	17	"	Ireland	...	s	...	...	...	2	2	4 1/2	10	30 00 "	185 00	c	m	+	"	"	"
"	1264	31	England	England	17	s	...	...	...	4	4	12	10	40 00 "	480 00	c	m	+	"	"	"
"	1265	18	"	"	17	s	...	...	...	1	1	12	10	32 00 "	384 00	c	m	+	same	"	"
Miner.....	1266	21	Canada	"	18	s	...	...	...	5	5	12	10	35 00 "	420 00	c	m	+	not answ'd	"	"
"	1267	52	England	"	25	m	4	2	5	19	19	12	10	48 00 "	576 00	c	m	+	same	miner	20 00 per mo
"	1268	49	"	"	20	m	4	2	5	15	15	11 1/2	10	48 00 "	540 00	c	m	+	less	"	15 00 "
"	1269	47	"	"	15	m	5	5	6	13	13	12	10	48 00 "	576 00	c	m	+	same	mining	15 00 "
"	1270	45	"	"	17	m	7	4	6	12	12	12	10	48 00 "	600 00	c	m	+	"	machinist	25 00 "
"	1271	28	Ireland	Ireland	7	s	...	...	...	11	7	12	10	50 00 "	576 00	c	m	+	not answ'd	not answ'd	not answered
"	1272	36	"	"	7	s	...	...	...	1	1	12	10	48 00 "	576 00	c	m	+	"	"	"
"	1273	38	"	"	7	s	...	...	...	2	2	12	10	48 00 "	600 00	c	m	+	not answ'd	fishing	15 00 per mo
"	1274	39	"	"	15	m	4	2	5	20	15	12	10	55 00 "	576 00	c	m	+	same	miner	not answered
"	1275	40	"	"	15	m	2	1	3	20	12	12	10	48 00 "	375 00	c	m	+	"	not answ'd	"
"	1276	39	"	"	7	m	2	...	4	3	3	7 1/2	10	50 00 "	204 00	c	m	+	not answ'd	miner	15 00 per mo
"	1277	17	"	"	14	s	...	...	...	2	2	6	10	34 00 "	720 00	c	m	+	"	"	"
"	1278	41	"	"	15	m	8	4	6	14	14	12	10	60 00 "	812 00	c	m	+	"	miner	15 00 per mo
"	1279	15	"	"	14	s	...	...	...	1	1	12	10	26 00 "	312 00	c	m	+	"	"	"
"	1280	32	"	"	13	m	6	2	6	13	12	13	10	45 00 "	576 00	c	m	+	same	miner	15 00 per mo
"	1281	40	"	"	18	m	5	3	5	12	13	9	10	48 00 "	432 00	c	m	+	not answ'd	"	20 00 "

[illegible]

* Gives wages to his parents.

↑ Refused.

‡ Has wages of four men.

TABLE No. 7.—Continued.

Occupation.	Line number.	How many hours for a day's work in the old country.	Amount of money at interest or in the bank.	If foreign born, how much money did you have on arrival in U. S.	Do you own your home. If so, its value.	If mortgaged, amount of mortgage.	Rate of interest.	Are you as well off as five years ago.	Loss of time.			If renting home, monthly rental.	If boarding, cost per week, including room.	Life insurance, how much.	Do you belong to a benefit society.	Weekly benefit in case of sickness or accident.	Have you a sewing machine.	Have you a piano.	Have you an organ.	Do you take a newspaper.			Age began work.	State of health then.	State of health now.	Amount of relief rendered friends in the old country.	Amount of money furnished to friends for passage to U. S.
									From sickness — (Days)	Inability to obtain work. — (Days.)	(Causes not stated. — (Days.)									Daily.	Weekly.	Monthly.					
Engineer.....	1249	8	+		no			yes			\$4 00				yes	\$5 00	yes	no	no	yes	no	14	good	good			
Teamster.....	1250	8			\$350						4 00					5 00			yes	no	no	12	"	"			
".....	1251															5 00	no		no	yes	no	9	"	"			
".....	1252				no						4 00					5 00			no	yes	no	15	"	"			
".....	1253										4 00					5 00				no	no	17	"	"			
Laborer.....	1254	8	+	+	375							\$4 00				5 00	yes	yes				16	"	"			
".....	1255				no											5 00	no	no	yes			9	"	"			
".....	1256	8									3 00					5 00			no				"	"			
".....	1257	8									3 00					5 00			no				"	"			
".....	1258	10									3 00					5 00	no						"	"			
".....	1259	8	+								4 00					5 00	yes						"	"			
".....	1260	8	+	\$10							4 00	4 50				5 00	no							"	"		
".....	1261		+	75												5 00							18	"	"		
".....	1262		+													5 00							16	"	"		
".....	1263															5 00							16	"	"		
".....	1264		+					yes								5 00						17	"	"			
Miner.....	1265							yes				4 50				5 00						17	"	"			
".....	1266		+	+				yes							no	5 00	yes			yes	no	16	"	"			
".....	1267	8	+						19		4 00					5 00	no				yes	9	"	"			
".....	1268	8	+								3 00					5 00	no				no	16	"	"			
".....	1269	8	+								4 00					5 00	yes				yes	12	"	"			
".....	1270	8	+								4 00					5 00			yes			12	"	"			
".....	1271		+													5 00	no		no	no	no	12	"	"			
".....	1272		+									4 50				5 00						12	"	"			
".....	1273		+									4 50				5 00						10	"	"			
".....	1274	8	+		450								\$1,000			5 00	yes				yes	14	"	"			
".....	1275				no						5 00					5 00	no					20	"	"			
".....	1276	8	+								4 00					5 00					no	8	"	"			
".....	1277															5 00						15	"	"			
".....	1278	8						yes			4 00					5 00						16	"	"			
".....	1279											5 00				5 00						14	"	"			
".....	1280	8	+					yes			4 00					5 00						16	"	"			
".....	1281	8	+					yes	78		4 00					5 00	yes			yes	yes	11	"	"			

[illegible]

Refused.

TABLE NO. 7.—Continued.

Occupation.	Line number.	Age.	Nativity.	Nativity of parents.	How long in U. S., if foreign born.—(Years.)	Married or single.	How many children in family.	How many attend school.	How many depend on you for support.	How many years at present occupation.	How long with present employer.—(Years.)	Numbr days employed	Wages per m	Annual earnings.	Are you paid cash or trade.	How often are you paid.	Amount saved during the year.	How do wages compare with former years in this country.	What occupation did you follow in the old country.	Wages received in the old country.
Engineer	1327	45	Germany	Germany	25	m	0	4	7	1	17 yrs	12	10 948 00	\$576 00	c	m	\$125	not answer'd	miner	\$15 00 per mo
Railroad hand	1328	30	U. S.	Ireland	...	s	...	...	...	4	4	12	10 39 00	468 00	c	m	180	same	carpenter	40 00 per mo
Teamster	1329	31	U. S.	Canada	1	m	4	3	...	3	1	12	10 47 00	564 00	c	m	200	"	machinist	25 00 "
Blacksmith helper	1330	33	Canada	England	10	m	2	3	6	10	9	12	10 45 00	540 00	c	m	100	not answer'd	painter	20 00 "
Timberman	1331	38	England	Norway	5	m	2	1	3	12	5	12	10 05 00	780 00	c	m	350	same	"	not answer'd
Painter	1332	29	Norway	Austria	5	m	1	1	2	6	1	12	10 54 00	648 00	c	m	509	"	"	25 00 per mo
Lander	1333	31	Austria	Finland	1	s	...	...	...	10	4	12	10 03 00	624 00	c	m	275	"	not answer'd	not answer'd
Painter	1334	30	Finland	Canada	4	m	...	...	...	1	10	12	10 52 00	624 00	c	m	300	"	"	not answer'd
"	1335	26	Canada	...	14	m	...	...	...	1	10	12	10 09 00	558 00	c	m	400	less	miner	15 00 per mo
Blacksmith	1336	24	England	England	23	m	6	4	7	21	17	12	10 76 00	900 00	c	m	100	same	plumber	25 00 "
"	1337	27	England	...	20	m	3	1	3	1	1	12	10 47 00	564 00	c	m	300	not so good	plasterer	20 00 per mo
Brakeman	1338	45	"	Ireland	16	m	4	2	5	30	7	12	10 35 00	1080 00	c	m	100	same	"	15 00 per mo
Mine plumber	1339	45	U. S.	Sweden	6	s	...	...	...	10	4	12	10 35 00	430 00	c	m	300	"	"	20 00 per mo
Oiler	1340	21	Sweden	Germany	18	s	6	3	7	...	...	12	10 50 00	600 00	c	m	300	"	laborer	16 00 per mo
Mine plasterer	1341	31	Sweden	Finland	9	m	...	...	...	2	3	12	10 08 00	768 00	c	m	500	higher	sawyer	25 00 "
Mine chemist	1342	29	Germany	"	5	m	1	1	2	1	1	12	10 43 00	576 00	c	m	300	same	farmer	5 00 "
Timber boss	1343	31	Finland	"	1	s	...	...	...	1	1	12	10 43 00	576 00	c	m	200	"	laborer	15 00 "
Timberman	1344	31	"	Ireland	20	m	...	...	...	1	1	12	10 43 00	576 00	c	m	200	less	"	"
"	1345	24	"	England	1	m	...	...	...	1	1	12	10 43 00	576 00	c	m	175	same	"	"
"	1346	23	Ireland	England	16	m	...	...	...	1	1	12	10 38 00	384 00	c	m	"	"	"	"
Laborer	1347	38	England	Canada	20	m	...	...	...	1	1	12	10 39 00	468 00	c	m	200	"	"	"
"	1348	31	"	Sweden	16	m	...	...	...	1	1	12	10 50 00	600 00	c	m	200	"	lumberman	26 00 per mo
"	1349	31	Canada	Sweden	16	m	...	...	...	1	1	12	10 40 00	480 00	c	m	150	not answer'd	miner	16 00 "
"	1350	31	"	"	9	m	6	3	4	...	...	12	10 45 00	540 00	c	m	200	same	laborer	7 25 "
"	1351	31	Germany	England	20	m	6	4	7	1	1	12	10 45 00	540 00	c	m	150	less	farmer	9 00 "
Engineer	1352	31	U. S.	"	...	s	...	...	...	...	...	12	10 50 00	600 00	c	m	300	same	"	"
"	1353	31	"	England	...	s	...	...	...	...	...	12	10 40 00	480 00	c	m	300	higher	perfumer	40 00 per mo
"	1354	31	England	England	...	m	...	...	...	...	...	12	10 57 00	654 00	c	m	...	same	"	"

"	1380	40	Ireland	Ireland	28	m	7	4	6	23	19	"	12	10	70	00	"	840	00	c	m	200	same	foundry	don't know
Machinist	1381	37	U. S.	Switzerland	10	s	8	4	1	1	1	"	12	10	40	00	"	480	00	c	m	150	better	machinist	20 00 per mo
"	1382	30	Germany	Germany	8	m	3	1	4	8	8	"	12	10	60	00	"	720	00	c	m	225	same	musician	not answered
Lander	1383	33	"	"	30	s	3	1	1	2	2	"	12	10	54	00	"	648	00	c	m	225	not ans'w'd	"	not answered
"	1384	36	"	"	30	s	3	1	1	17	17	"	12	8	53	00	"	636	00	c	m	300	same	"	not answered
Trammer	1385	24	"	"	6	s	3	1	1	2	2	"	12	8	53	00	"	636	00	c	m	250	higher	farmer	5 00 per mo
"	1386	28	Finland	Finland	7	m	3	1	1	1	1	"	12	10	53	00	"	636	00	c	m	300	same	"	not answered
"	1387	33	"	"	8	s	3	1	1	1	1	"	12	8	53	00	"	636	00	c	m	300	same	"	not answered
Drill boy	1388	17	Sweden	Sweden	20	s	3	1	1	1	1	"	12	10	32	00	"	384	00	c	m	*	not ans'w'd	"	not answered
"	1389	14	U. S.	England	8	s	3	1	1	1	1	"	12	10	32	00	"	384	00	c	m	*	not ans'w'd	"	not answered
"	1370	17	"	"	8	s	3	1	1	1	1	"	12	10	23	00	"	384	00	c	m	*	not ans'w'd	"	not answered
Miner	1371	18	"	U. S.	9	s	3	1	1	4	4	"	12	10	48	00	"	576	00	c	m	300	same	farmer	5 00 per mo
"	1372	10	Finland	Finland	20	m	3	1	1	1	1	"	12	10	55	00	"	660	00	c	m	125	same	"	not answered
"	1373	40	"	"	8	m	3	1	1	20	20	"	12	16	48	00	"	576	00	c	m	125	same	farmer	10 00 per mo
"	1374	41	"	"	8	m	3	1	1	2	2	"	12	10	48	00	"	576	00	c	m	175	less	"	not answered
"	1375	36	"	"	5	m	3	1	1	2	2	"	12	10	55	00	"	660	00	c	m	200	not ans'w'd	"	not answered
"	1376	40	Germany	Germany	31	m	3	1	1	20	20	"	12	8	53	00	"	636	00	c	m	100	same	"	not answered
"	1377	12	England	England	15	m	3	1	1	20	14	"	12	10	48	00	"	576	00	c	m	200	less	miner	15 00 per mo
"	1378	30	"	"	20	m	3	1	1	22	22	"	12	10	48	00	"	576	00	c	m	200	not ans'w'd	"	not answered
"	1379	30	"	"	5	m	3	1	1	15	2	"	12	10	48	00	"	576	00	c	m	200	less	"	not answered
Teamster	1380	33	Norway	Norway	15	m	3	1	1	15	2	"	12	10	55	00	"	660	00	c	m	150	same	fisherman	don't know
"	1381	45	"	"	18	m	3	1	1	24	2	"	12	10	55	00	"	660	00	c	m	200	same	miner	15 00 per mo
"	1382	24	"	"	7	m	3	1	1	6	6	"	12	10	55	00	"	660	00	c	m	200	same	sailor	16 00 "
"	1383	43	Sweden	Sweden	15	m	3	1	1	7	7	"	12	10	48	00	"	576	00	c	m	75	same	laborer	16 00 "
"	1384	32	Canada	Canada	9	m	3	1	1	9	9	"	11 1/2	10	47	00	"	540	50	c	m	125	not ans'w'd	not ans'w'd	not answered
"	1385	34	"	"	16	m	3	1	1	15	15	"	12	10	47	00	"	564	00	c	m	+	same	farmer	15 00 per mo
"	1386	34	"	"	20	m	3	1	1	8	8	"	12	10	47	00	"	564	00	c	m	+	same	"	for father
"	1387	10	"	"	35	m	3	1	1	25	18	"	11	10	47	00	"	517	00	c	m	+	same	"	13 00 per mo
"	1388	44	"	"	20	m	3	1	1	15	15	"	12	10	47	00	"	564	00	c	m	+	less	"	13 00 "
"	1389	53	"	"	40	m	3	1	1	30	15	"	12	10	47	00	"	564	00	c	m	75	less	"	not answered
"	1390	28	U. S.	U. S.	16	m	3	1	1	7	7	"	12	10	47	00	"	564	00	c	m	200	same	"	not answered
"	1391	16	"	"	20	s	3	1	1	1	1	"	6 1/2	10	30	00	"	202	50	c	m	125	same	"	not answered
Blacksmith	1392	53	"	U. S.	7	m	3	1	1	6	6	"	12	10	47	00	"	564	00	c	m	200	same	"	not answered
"	1393	28	"	Ireland	15	m	3	1	1	8	8	"	10	10	70	00	"	700	00	c	m	75	same	"	not answered
"	1394	22	"	England	9	s	3	1	1	2	2	"	9	10	45	00	"	405	00	c	m	+	less	"	not answered
"	1395	19	"	Germany	8	s	3	1	1	3	3	"	12	10	47	00	"	564	00	c	m	250	less	blacksmith	40 00 per mo
"	1396	33	Canada	Canada	7	m	3	1	1	20	5	"	12	10	85	00	"	1,020	00	c	m	500	same	musician	don't know
Trammer	1397	31	Germany	Germany	4	s	3	1	1	3	2	"	12	10	53	00	"	636	00	c	m	250	same	farming	18 00 per mo
"	1398	35	Austria	Austria	10	s	3	1	1	4	4	"	12	10	53	00	"	636	00	c	m	200	less	"	15 00 "
Brakeman	1399	36	Scotland	Scotland	10	s	3	1	1	8	8	"	12	10	50	00	"	600	00	c	m	200	less	"	not answered
Blacksmith helper	1400	17	U. S.	Ireland	5	s	3	1	1	1	1	"	12	10	85	00	"	420	00	c	m	+	less	"	not answered
"	1401	27	Austria	Austria	23	s	3	1	1	5	5	"	10	10	70	00	"	700	00	c	m	800	less	mason	don't know
Fireman	1402	38	Canada	Canada	15	s	3	1	1	9	9	"	12	8	53	00	"	672	00	c	m	+	less	not ans'w'd	not answered
Miner	1403	41	England	England	16	m	3	1	1	27	12	"	11 1/2	10	60	00	"	660	00	c	m	250	same	miner	20 00 per mo
"	1404	41	"	"	16	m	3	1	1	14	6	"	11	10	60	00	"	660	00	c	m	250	same	laborer	15 00 "

* Gives wages to his father.

† Refused.

LABOR AND INDUSTRIAL STATISTICS.

TABLE NO. 7.—Continued.

Occupation.	Line number.	How many hours for a day's work in the old country.	Amount of money at interest or in the bank.	If foreign born, how much money did you have on arrival in U. S.	Do you own your home. If so, its value.	If mortgaged, amount of mortgage.	Rate of interest.	Are you as well off as five years ago.	Loss of time.			If renting home, monthly rental.	If boarding, cost per week, including room.	Life insurance, how much.	Do you belong to a benefit society.	Weekly benefit in case of sickness or accident.	Have you a sewing machine.	Have you a piano.	Have you an organ.	Do you take a newspaper.			State of health then.	State of health now.	Amount of relief rendered friends in the old country.	Amount of money furnished to friends for passage to U. S.
									From sickness.—(Days.)	Inability to obtain work.—(Days.)	Causes not stated.—(Days.)									Daily.	Weekly.	Monthly.				
Engineer.....	1327	8	+	..	no	..	..	yes	..	..	\$4 00	..	..	..	..	\$6 00	yes	no	no	no	yes	no	16	good	..	..
Railroad hand..	1328	..	..	..	..	..	..	yes	..	..	..	\$4 50	..	..	..	6 00	no	..	..	..	no	..	16	..	..	..
Teamster.....	1329	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6 00	..	..	..	..	..	..	18	..	..	..
Blacksmith.....	1330	10	++	+	..	..	..	..	..	..	2 00	..	..	..	..	6 00	yes	..	..	..	..	..	15	..	..	..
Timberman.....	1331	10	++	..	..	..	..	..	..	..	4 00	..	..	..	..	6 00	..	..	yes	..	..	..	..	..	..	..
Painter.....	1332	10	++	\$25	..	..	..	..	..	..	8 00	..	..	..	..	6 00	..	..	no	..	..	..	17	..	\$150	..
Lander.....	1333	10	++++	8	\$800	..	..	..	..	..	..	..	..	..	..	6 00	..	..	..	..	..	..	12	..	..	..
Painter.....	1334	10	++++	26	no	..	..	..	..	..	..	4 00	..	..	..	6 00	no	..	..	..	..	..	15	..	..	..
".....	1335	..	++++	..	..	..	..	..	..	..	..	..	..	..	..	6 00	..	..	..	..	..	..	15	..	..	..
Blacksmith.....	1336	..	++++	+	..	..	..	..	..	..	7 00	..	..	..	..	6 00	..	..	..	..	..	..	10	..	..	..
".....	1337	..	..	..	..	..	..	..	..	..	4 00	..	..	\$2,000	..	6 00	yes	..	yes	..	yes	..	16	..	..	..
Brakeman.....	1338	..	..	..	..	..	..	no	..	..	8 00	..	..	..	..	6 00	..	..	..	..	..	..	15	..	..	..
Mine plumber..	1339	10	..	70	..	..	..	yes	..	..	4 00	4 50	2,000	..	..	12 00	..	..	no	..	no	..	15	..	120	..
Oiler.....	1340	..	++	..	800	..	..	..	..	..	..	..	..	..	..	6 00	no	..	..	..	..	15	..	..	..
Mine plasterer..	1341	10	++	20	..	..	..	..	..	..	..	..	..	..	..	6 00	yes	..	..	..	..	18	..	..	..
Mine chemist..	1342	..	++	..	no	..	..	..	..	..	..	5 00	2,000	..	..	6 00	no	..	..	..	yes	..	23	..	..	..
Timber boss.....	1343	12	++	..	550	..	..	..	..	..	..	..	..	..	..	6 00	..	..	..	..	no	..	15	..	..	..
Timberman.....	1344	12	++	25	no	..	..	..	..	..	..	..	..	..	..	6 00	yes	..	..	..	..	..	15	..	..	..
".....	1345	12	++	..	..	..	..	..	..	..	..	..	..	..	..	6 00	no	..	..	..	..	..	12	..	..	..
".....	1346	12	++	..	..	..	..	..	..	..	4 00	..	..	..	..	6 00	..	..	..	..	..	..	12	..	..	..
".....	1347	..	++	..	..	..	..	..	..	..	4 00	..	..	..	..	6 00	..	..	..	..	..	..	18	..	..	..
".....	1348	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6 00	..	..	..	..	..	..	15	..	..	..
Laborer.....	1349	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6 00	..	..	..	..	..	..	15	..	..	..
".....	1350	..	++	..	..	..	..	..	..	..	..	4 50	1,000	..	..	6 00	..	..	..	..	..	..	15	..	..	..
".....	1351	..	++	..	..	..	..	..	..	..	..	4 50	..	..	..	6 00	..	..	..	..	..	..	15	..	..	..
".....	1352	12	++	33	..	..	..	..	..	..	4 00	..	..	..	..	6 00	yes	..	..	..	..	..	14	..	..	..
".....	1353	6	++	..	..	..	..	..	..	..	2 00	..	..	..	..	6 00	no	..	..	..	..	..	14	..	..	..
".....	1354	12	++	..	600	..	..	..	..	..	..	..	..	..	..	6 00	yes	..	..	..	..	..	9	..	..	..
".....	1355	..	++	28	700	..	..	..	..	..	..	..	..	..	..	6 00	no	..	..	..	yes	..	12	..	..	..
Engineer.....	1356	..	++	..	no	4 50	6 00	no	..	16
".....	1357	..	++	6 00	16
".....	1358	..	++	..	600	6 00	yes	yes	..	12
".....	1359	10	++	75	no	4 00	6 00	no	..	10

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1360	"	10	+	15	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"
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Refused.

TABLE NO. 7.—Continued.

Blaster	1438 28	Finland	1 m	3	3	1	6 mo	5	13	45 50	"	227 50	o	m	better	blaster	19 50 per mo
Teamster	1439 43	Sweden	15 m	2	1	5	5 yrs	11½	14	45 50	"	523 25	o	m	100	same	laborer	refused
"	1440 29	Norway	16 m	3	4	18	1 mo	12	12	53 50	"	703 00	o	m	*	not ans'w'd	fisherman	uncertain
Laborer	1441 21	"	13 s	.....	.....	7	1 yr	12	15	33 50	"	300 00	o	m	*	better	.....	.....
"	1442 25	"	1 s	.....	.....	4	1	12	10	36 00	"	432 00	o	m	.....	don't know	fisherman	.....
"	1443 45	"	12 m	3	1	4	2	12	10	36 00	"	432 00	o	m	.....	same	pilot	20 00 per mo
"	1444 40	Finland	1 m	3	3	1	5 mo	12	10	39 00	"	404 00	o	m	.....	better	farmer	6 25
"	1445 37	"	8 m	4	1	5	8 yrs	7	10	39 00	"	273 00	o	m	.....	same	servant	refused
"	1446 28	"	2 s	.....	.....	.....	9	6	10	39 00	"	204 00	o	m	.....	better	"	.....
"	1447 38	"	1 s	.....	.....	.....	1	12	10	36 00	"	432 00	o	m	.....	.....	sailor	14 00 per mo
"	1448 25	"	2 s	.....	.....	.....	5 mo	5	10	42 00	"	210 00	o	m	.....	same	laborer	6 50
"	1449 37	"	1 m	2	3	1	6	12	10	36 00	"	432 00	o	m	.....	don't know	farmer	12 00
"	1450 35	"	1 s	.....	.....	.....	1 yr	12	12	39 00	"	408 00	o	m	.....	can't say	laborer	refused
"	1451 36	"	7 m	3	4	7	1	12	10	39 00	"	408 00	o	m	*	same	"	.....
"	1452 30	Sweden	5 s	.....	.....	.....	5	11½	10	39 00	"	438 75	o	m	.....	.....	farmer	.....
Miner	1453 38	Finland	12 m	4	3	5	17 12	12	10	50 00	"	600 00	o	m	50	.....	miner	15 00 per mo
"	1454 46	"	16 m	7	2	8	16	12	10	52 00	"	624 00	o	m	*	less	fishing	refused
"	1455 44	"	1 m	5	6	1	1	12	10	47 00	"	564 00	o	m	70	better	"	.....
"	1456 43	Sweden	16 m	7	3	8	13 10	11½	10	50 00	"	567 50	o	m	*	.....	timberman	25 00 per mo
"	1457 42	Finland	15 m	7	3	8	12 12	10	10	50 00	"	500 00	o	m	100	same	fisherman	refused
"	1458 45	"	16 s	.....	.....	.....	4	12	12	52 00	"	624 00	o	m	200	.....	"	.....
"	1459 42	"	8 m	5	1	6	8	11½	10	50 00	"	575 00	o	m	*	.....	farmer	"
"	1460 31	"	5 m	4	2	5	1	11½	10	36 00	"	402 50	o	m	.....	.....	shoemaker	"
"	1461 30	Sweden	8 m	8	4	2	1	11½	10	50 00	"	562 50	o	m	100	.....	farmer	"
"	1462 26	Sweden	15 m	1	2	10	10	12	10	50 00	"	600 00	o	m	.....	.....	.....	.....
"	1463 21	"	15 s	.....	.....	.....	5	9	10	45 50	"	409 50	o	m	.....	.....	fisherman	.....
"	1464 55	Norway	16 m	10	2	2	16	12	10	52 00	"	624 00	o	m	.....	.....	miner	25 00 per mo
"	1465 24	Finland	2 s	.....	.....	.....	2	11	10	48 00	"	528 00	o	m	100	better	"	25 00
"	1466 23	Sweden	11 m	1	.....	.....	11	12	10	46 50	"	546 00	o	m	100	same	"	refused
"	1467 28	Norway	10 m	1	2	2	4	12	10	50 00	"	600 00	o	m	100	.....	fisherman	.....
"	1468 40	"	18 m	1	1	2	18	12	10	50 00	"	600 00	o	m	100	.....	miner	30 00 per mo
"	1469 28	Finland	16 m	2	1	3	10 10	12	10	50 00	"	600 00	o	m	50	.....	.....	.....
"	1470 41	Norway	9 m	2	2	3	4	12	10	50 00	"	600 00	o	m	100	.....	miner	25 00 per mo
"	1471 38	"	8 m	5	3	6	2	12	10	50 00	"	600 00	o	m	.....	.....	fisherman	refused
"	1472 36	Finland	16 m	2	.....	.....	2	11½	12	45 50	"	534 61	o	m	.....	.....	.....	.....
"	1473 38	Norway	15 m	5	3	6	14	12	10	50 00	"	600 00	o	m	100	.....	miner	25 00 per mo
"	1474 31	Finland	15 m	2	.....	.....	10	12	10	50 00	"	600 00	o	m	*	.....	.....	.....
"	1475 43	"	17 m	3	.....	.....	8	12	10	50 00	"	600 00	o	m	126	.....	miner	18 00 per mo
"	1476 24	"	16 m	3	.....	.....	16	12	10	50 00	"	600 00	o	m	*	.....	fisherman	refused
"	1477 46	"	19 m	5	2	6	30 19	12	10	36 00	"	432 00	o	m	.....	less	miner	25 00 per mo
"	1478 38	Norway	10 m	3	1	4	4	12	10	50 00	"	600 00	o	m	50	same	"	18 00
"	1479 50	Finland	1 m	4	1	1	1	12	10	39 00	"	408 00	o	m	.....	.....	foundry	don't know
Laborer	1480 20	"	6 s	.....	.....	.....	1	12	10	50 00	"	600 00	o	m	300	higher	fishing	not ans'w'd
"	1481 26	"	1 s	.....	.....	.....	1	12	10	39 00	"	468 00	o	m	.....	.....	farmer	5 00 per mo
"	1482 44	"	8 m	3	.....	.....	2 mo	12	10	48 00	"	576 00	o	m	.....	not ans'w'd	self	.....

* Refused.

TABLE NO. 7.—Continued.

Occupation.	Line number.	How many hours for a day's work in the old country.	Amount of money at interest or in the bank.	If foreign born, how much money did you have on arrival in U. S.	Do you own your home, if so, its value.	If mortgaged, amount of mortgage.	Rate of interest.	Are you as well off as five years ago.	Loss of time.			If renting home, monthly rental.	If boarding, cost per week, including room.	Life insurance, how much.	Do you belong to a benevolent society.	Weekly benefit in case of sickness or accident.	Have you a sewing machine.	Have you a piano.	Have you an organ.	Do you take a newspaper.			State of health then.	State of health now.	Amount of relief rendered friends in the old country.	Amount of money furnished to U. S. friends for passage to U. S.
									From sickness.—	(Days.)	Inability to obtain work.—(Days.)									Causes not stated.—(Days.)	Daily.	Weekly.					Monthly.
Miner	1405				no			yes			\$7 00	\$6 00				\$6 00	no	no	no	no	no	good	good	\$100		
	1406				"			"			4 00	6 00				6 00	yes	"	"	"	"	"	"	75		
	1407				"			"			4 00	6 00				6 00	"	"	"	"	"	"	"	25		
	1408				"			"			4 00	6 00				6 00	"	"	"	"	"	"	"	25		
	1409				"			"										"	"	"	"	"	"	25		
Laborer	1410				"			"			4 00	6 00		\$5,000		6 00	"	"	yes	"	"	"	"	"		
	1411				"			"			8 00	6 00				6 00	"	"	no	"	"	"	"	"		
	1412				"			"			8 00	6 00				6 00	"	"	no	"	"	"	"	"		
	1413			\$20	"			"			4 00	6 00				6 00	"	"	yes	"	"	"	"	"		
	1414		\$6,500		"			"			8 00	6 00				6 00	"	"	"	"	"	"	"	"		
	1415				"			"			8 00	6 00				6 00	"	"	"	"	"	"	"	"		
	1416				"			"			4 00	6 00			1,000	6 00	"	"	"	"	"	"	"	"		
	1417		+		"			"	188		3 00	6 00				6 00	"	"	"	"	"	"	"	"		
	1418		+		"			yes			4 00	6 00				6 00	"	"	"	"	"	"	"	"		
	1419		+		"												"	"	"	"	"	"	"	"		
	1420				"			yes						1,000		6 00	yes	"	"	"	yes	"	"	"		
	1421				"			yes								6 00	"	"	"	"	"	"	"	"		
	1422				"					52						6 00	"	"	"	"	"	"	"	"		
	1423				"								4 50			6 00	"	"	"	"	"	"	"	"		
Carpenter	1424				"			yes			2 00	6 00				6 00	"	"	"	"	"	"	"	"		
	1425				"											6 00	yes	"	"	"	yes	"	"	"		
	1426				"			"			8 00	6 00				6 00	"	"	yes	"	"	"	"	"		
	1427		2,000	15	"			"			8 00	6 00		1,000		6 00	"	"	no	"	"	"	"	"		
	1428		+	26	"			"			2 00	6 00				6 00	"	"	"	"	"	"	"	"		
Engineer	1429		+		"			"			6 00	6 00				6 00	"	"	"	"	"	"	"	"		
	1430				"			"					5 00			6 00	no	"	"	"	"	"	"	"		
	1431				"			"								6 00	"	"	"	"	"	"	"	"		
	1432				"			"								6 00	yes	"	"	"	"	"	"	"		
	1433		+		"			"		6	4 00	6 00		1,000		6 00	no	"	"	"	yes	"	"	"		
	1434		+	16	"			"					5 00			6 00	no	"	"	"	no	"	"	"		
	1435				"			no			7 00	6 00		1,000		6 00	yes	"	"	"	yes	"	"	"		
	1436				"			yes					4 75	1,000		6 00	no	"	"	"	"	"	"	"		
Book-keeper	1437			\$1,800	"			b't'r	7							6 00	yes	"	"	"	"	"	"	"		
	1438			400	1,100			yes									no	"	"	"	"	"	"	"		
	1439																	"	"	"	"	"	"	"		
Butcher	1440							yes									no	"	"	"	"	"	"	"		
	1441																	"	"	"	"	"	"	"		

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TABLE NO. 7.—Continued.

TABLE NO. 7.—Continued.

Occupation.	Line Number.	How many hours for a day's work in the old country.	Amount of money at interest or in the bank.	If foreign born, how much money did you have on arrival in U. S.	Do you own your home. If so, its value.	If mortgaged, amount of mortgage.	Rate of interest.	Are you as well off as five years ago.	Loss of time.			If renting home, monthly rental.	If boarding, cost per week, including room.	Life insurance, how much.	Do you belong to a benefit society.	Weekly benefit in case of sickness or accident.	Have you a sewing machine.	Have you a piano.	Have you an organ.	Do you take a newspaper.			State of health then.	State of health now.	Amount of relief rendered friends in the old country.	Amount of money furnished to friends for passage to U. S.
									From sickness.—(Days.)	Inability to obtain work.—(Days.)	Causes not stated.—(Days.)									Daily.	Weekly.	Monthly.				
Laborer	1483	10	+	25	no	no	no	yes							yes	6 00	no	no	no	no	no	no	good	good	350	
"	1484	12	+	11	400	no	no	yes					4 00	1,000	yes	5 00	yes	no	no	no	yes	no	good	good		
"	1485	12	+	15	no	no	no	yes					4 00	5,000	yes	6 00	no	no	no	no	no	no	good	good		
Brakeman	1486	10	+	25	no	no	no	yes					4 00		yes	6 00	no	no	no	no	no	no	good	good		
"	1487	10	+	50	no	no	no	yes					4 00		yes	6 00	no	no	no	no	no	no	good	good		
Fireman	1488	10	+	100	600	no	no	yes					7 00	1,000	yes	5 00	yes	no	no	no	yes	no	good	good		
Lander	1489	10	+	100	no	no	no	yes					4 00		yes	6 00	no	no	no	no	no	no	good	good		
Car filler	1490	10	+	100	1,000	no	no	yes					4 00		yes	6 00	no	no	no	no	no	no	good	good		
Dryman	1491	10	+	100	400	no	no	yes					4 00		yes	6 00	no	no	no	no	no	no	good	good		
Engineer	1492	10	+	25	1,000	no	no	yes					4 00		yes	6 00	no	no	no	no	no	no	good	good		
Trammer	1493	12	+	25	no	no	no	yes					4 00		yes	6 00	no	no	no	no	no	no	good	good		
"	1494	12	+	25	no	no	no	yes					4 00		yes	6 00	no	no	no	no	no	no	good	good		
"	1495	12	+	25	no	no	no	yes					4 00		yes	6 00	no	no	no	no	no	no	good	good		
"	1496	12	+	25	no	no	no	yes					4 00		yes	6 00	no	no	no	no	no	no	good	good		
"	1497	12	+	25	no	no	no	yes					4 00		yes	6 00	no	no	no	no	no	no	good	good		
"	1498	12	+	25	no	no	no	yes					4 00		yes	6 00	no	no	no	no	no	no	good	good		
"	1499	12	+	25	no	no	no	yes					4 00		yes	6 00	no	no	no	no	no	no	good	good		
"	1500	12	+	25	no	no	no	yes					4 00		yes	6 00	no	no	no	no	no	no	good	good		
"	1501	12	+	25	no	no	no	yes					4 00		yes	6 00	no	no	no	no	no	no	good	good		
"	1502	12	+	25	no	no	no	yes					4 00		yes	6 00	no	no	no	no	no	no	good	good		
"	1503	12	+	25	no	no	no	yes					4 00		yes	6 00	no	no	no	no	no	no	good	good		
"	1504	12	+	25	no	no	no	yes					4 00		yes	6 00	no	no	no	no	no	no	good	good		
"	1505	12	+	25	no	no	no	yes					4 00		yes	6 00	no	no	no	no	no	no	good	good		
"	1506	12	+	25	no	no	no	yes					4 00		yes	6 00	no	no	no	no	no	no	good	good		
"	1507	12	+	25	no	no	no	yes					4 00		yes	6 00	no	no	no	no	no	no	good	good		
"	1508	12	+	25	no	no	no	yes					4 00		yes	6 00	no	no	no	no	no	no	good	good		
"	1509	10	+	25	no	no	no	yes					4 00		yes	6 00	no	no	no	no	no	no	good	good		
Drill boy	1510	10	+	25	no	no	no	yes					4 00		yes	6 00	no	no	no	no	no	no	good	good		
"	1511	10	+	25	no	no	no	yes					4 00		yes	6 00	no	no	no	no	no	no	good	good		
"	1512	10	+	25	no	no	no	yes					4 00		yes	6 00	no	no	no	no	no	no	good	good		
"	1513	10	+	25	no	no	no	yes					4 00		yes	6 00	no	no	no	no	no	no	good	good		
"	1514	10	+	25	no	no	no	yes					4 00		yes	6 00	no	no	no	no	no	no	good	good		
Miner	1515	10	+	25	900	no	no	yes					4 00	1,000	yes	6 00	no	no	no	no	no	no	good	good		

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TABLE No. 7.—Continued.

TABLE NO. 7.—Continued.

Occupation.	Line number.	How many hours for a day's work in the old country.	Amount of money at interest or in the bank.	If foreign born, how much money did you have on arrival in U. S.	Do you own your home. If so, its value.	If mortgaged, amount of mortgage.	Rate of interest.	Are you as well off as five years ago.	Loss of time.			If renting home, monthly rental.	If boarding, cost per week, including room.	Life insurance, how much.	Do you belong to a benefit society.	Weekly benefit in case of sickness or accident.	Have you a sewing machine.	Have you a piano.	Have you an organ.	Do you take a newspaper.			Age began work.	State of health then.	State of health now.	Amount of relief rendered friends in the old country.	Amount of money furnished to U. S. passage to U. S.
									From sickness.—(Days.)	Inability to obtain work.—(Days.)	Causes not stated.—(Days.)									Daily.	Weekly.	Monthly.					
Miner	1561	10	\$500		\$800			yes	28	96		\$4 50		yes	\$6 25	yes	no	no	no	no	10	good	good	\$50	\$800		
"	1562	10		\$25	no			"		72		4 00		no	6 25	no	"	"	"	"	12	"	"	10			
Laborer	1563	9			"			"		156		4 00		yes	6 25	"	"	"	yes	"	12	"	"				
"	1564	9			"			yes		117		4 50		"	6 50	"	"	"	no	"	12	"	"				
"	1565	10			"			"						"	6 50	"	"	"	"	"	12	"	"				
"	1566	10		15				"		78		4 50		no		"	"	"	"	"	11	"	"				
"	1567	10		10				"	39	52		4 50		yes	6 50	"	"	"	"	"	11	"	"				
"	1568	10		50				"	18	92		4 50		yes	5 00	yes	"	"	yes	"	12	"	"	10			
"	1569				"			no	6	97				"	6 50	no	"	"	no	"	8	"	"				
"	1570	12			"			yes			3 00						"	"	"	"	15	"	"				
"	1571				"			"				4 25		"	5 00	"	"	"	yes	"	15	"	"				
"	1572				"			"		52	4 00	5 00		"	6 25	yes	"	"	yes	"	17	"	"				
"	1573				"			yes						"	6 25	no	"	"	no	"	16	"	"				
"	1574				"			"			4 00			"	6 25	"	"	"	"	"	15	"	"				
"	1575				"			"			5 00			"	6 00	"	"	"	"	"	15	"	"				
Copper dryer	1576				"							3 50		no		"	"	"	yes	"	14	"	"				
Silver picker	1577				"							3 25		"		"	"	"	no	"	13	"	"				
"	1578				"					18		2 50		"		"	"	"	"	"	15	"	"				
Copper carrier	1579				"							2 50		"		"	"	"	"	"	13	"	"				
Tie boy	1580				"							2 50		"		"	"	"	"	"	14	"	"				
Copper washer	1581	14			"			no			1 50			yes	18 00	"	"	"	yes	"	14	"	"				
"	1582		16		"			b't'r						"	16 00	yes	"	"	"	"	14	"	"	50			
Carpenter	1583				"			yes		208		5 00		no		no	"	"	yes	"	14	"	"				
Spare hand	1584				"			b't'r				5 00		"		no	"	"	"	"	16	"	"				
Teamster	1585				"			yes			7 00			"		"	"	"	yes	"	14	"	"				
Running cars	1586				800			yes				5 00		"		"	"	"	"	"	16	"	"				
Engineer	1587				no			no			3 00			yes	18 00	yes	"	"	no	yes	5	"	poor				
Mrchine tender	1588				"							4 61		no		no	"	"	yes	no	15	"	good				
"	1589				"							4 61		"		"	"	"	"	"	11	"	"				
"	1590				"				6			4 61		"		"	"	"	no	"	14	"	"				
"	1591				"				6			2 00		"		"	"	"	yes	"	12	"	"				
Feeding heads	1592	11		80 cts	"			yes	52		3 00			"		yes	"	"	"	"	12	"	"				
"	1593			200	"			no		208	5 00		\$500	yes	18 00	yes	"	"	"	"	16	"	"	70			

TABLE No. 7.—Continued.

Occupation.	Line number.	Age.	Native.	Native of parents.	How long in U. S., if foreign born.—(Years.)	Married or single.	How many children in family.	How many attend school.	How many depend on you for support.	How many years at present occupation.	How long with present employer.—(Years.)	Number of months employed during year.	How many hours for a day's work.	Wages paid.	Annual earnings.	Are you paid cash or trade.	How often are you paid.	Amount saved during the year.	How do wages compare with former years in this country.	What occupation did you follow in the old country.	Wages received in the old country.
Machine tender	1639	15	U. S.	Ireland	—	s	—	—	—	1	2 yrs	12	10	\$20 00 pr. m	\$240 00	c	m	—	not ans'w'd	—	—
"	1640	18	"	"	—	s	—	—	—	1	6	6	10	22 00	132 00	c	m	—	"	—	—
"	1641	17	"	England	—	s	—	—	—	1	1½	11½	10	22 00	258 50	c	m	—	"	—	—
Silver picker	1642	14	"	Ireland	—	s	—	—	—	—	8 mo	8	10	18 00	89 00	c	m	—	"	—	—
"	1643	16	"	Germany	—	s	—	—	—	2	2 yrs	12	10	18 00	156 00	c	m	—	"	—	—
"	1644	16	"	"	—	s	—	—	—	1	1	12	10	20 00	240 00	c	m	—	"	—	—
Spare hand	1645	15	"	England	—	s	—	—	—	1	1	12	10	20 00	240 00	c	m	—	"	—	—
"	1646	17	"	Ireland	—	s	—	—	—	1	2½	12	10	20 00	240 00	c	m	—	"	—	—
"	1647	21	"	England	—	s	—	—	—	1	1	12	10	40 00	480 00	c	m	—	"	—	—
"	1648	17	"	Germany	—	s	—	—	—	1	6	11½	10	22 00	263 00	c	m	—	"	—	—
"	1649	50	Germany	Germany	10	m	6	2	7	7	7	12	10	36 00	432 00	c	m	—	better	miner	\$0 75 per day
Carpenter	1650	34	Canada	Ireland	20	m	8	1	4	4	15	12	10	60 00	720 00	c	m	\$300	same	farmer	father
Teamster	1651	29	"	"	9	m	8	—	4	9	3 mo	12	10	45 00	540 00	c	m	200	better	trammer	15 00 per mo
Mason	1652	30	England	England	20	m	2	—	8	10	10 yrs	12	10	50 00	600 00	c	m	—	same	miner	20 00 "
Copper cutter	1653	55	"	"	30	m	4	2	8	20	15	12	10	50 00	600 00	c	m	—	less	—	—
Timberman	1654	25	"	"	15	m	1	—	23	3	3 mo	3	10	60 00	180 00	c	m	125	higher	—	—
Clerk	1655	26	"	"	22	s	—	—	1	4	4 yrs	12	10	60 00	720 00	c	m	200	same	—	—
Brakeman	1656	19	"	"	8 m	s	—	—	—	4	6 mo	8	11	38 00	264 00	c	m	—	same	sailor	10 40 per mo
Blacksmith	1657	45	"	"	24	m	4	—	5	30	19 yrs	12	10	70 00	840 00	c	m	350	same	blacksmith	20 00 "
Blacksmith helper	1658	16	U. S.	"	—	s	—	—	—	2	2	12	10	26 00	312 00	c	m	—	not ans'w'd	—	—
Machinist	1659	30	"	"	—	m	6	4	7	9	2 mo	12	10	70 00	840 00	c	m	—	less	—	—
On break rock	1660	24	"	Ireland	—	s	—	—	—	6	1 yr	12	10	35 00	420 00	c	m	—	not ans'w'd	—	—
Fireman	1661	28	"	England	—	s	—	—	—	1	2 yrs	11½	12	38 00	456 00	c	m	—	"	—	—
Trimmer	1662	20	"	"	—	s	—	—	—	1	1	12	10	35 00	420 00	c	m	—	"	—	—
"	1663	20	Austria	Austria	4 m	s	—	—	—	8	4 mo	4	10	52 00	208 00	c	m	100	same	farmer	40 00 per year
Engineer	1664	33	Scotland	Scotland	8	m	3	—	5	3	8 yrs	12	10	50 00	600 00	c	m	—	lower	laborer	20 00 per mo
"	1665	19	U. S.	England	—	s	—	—	—	1	1	12	10	40 00	480 00	c	m	*	not ans'w'd	—	—
"	1666	41	England	"	15	m	2	1	8	2	18	11½	10	48 00	582 00	c	m	100	"	miner	20 00 per mo
Mining captain	1667	56	"	"	20	m	7	1	5	18	6	12	6	140 00	1,800 00	c	m	600	same	"	16 00 "
"	1668	50	"	"	26	m	4	—	—	36	25	12	10	75 00	900 00	c	m	700	better	"	15 00 "
"	1669	52	"	"	24	m	1	—	2	17	5 mo	5	10	100 00	500 00	c	m	200	same	"	6 25 "
Laborer	1670	50	Ireland	Ireland	—	s	—	—	—	6	6	12	10	37 00	444 00	c	m	150	better	not ans'w'd	not answered
"	1671	21	U. S.	Germany	—	s	—	—	—	9	3	12	10	37 00	444 00	c	m	100	not ans'w'd	—	—

LABOR AND INDUSTRIAL STATISTICS.

TABLE NO. 7.—Continued.

Occupation.	Line number.	How many hours for a day's work in the old country.	Amount of money at interest or in the bank.	If foreign born, how much money did you have on arrival in U. S.	Do you own your home. If so, its value.	If mortgaged, amount of mortgage.	Rate of interest.	Are you as well off as five years ago.	Loss of time.			If renting home, monthly rental.	If boarding, cost per week, including room.	Life insurance, how much.	Do you belong to a benevolent society.	Weekly benefit in case of sickness or accident.	Have you a sewing machine.	Have you a piano.	Have you an organ.	Do you take a newspaper.			State of health then.	State of health now.	Amount of relief rendered friends in the old country.	Amount of money furnished to friends for passage to U. S.
									From sickness.—	(Days.)	Inability to obtain work.—(Days.)									Causes not stated.—(Days.)	Daily.	Weekly.					Monthly.
Machine tender	1639	.....	.....	.....	no	.....	.....	.....	.....	.....	.....	.....	.....	.....	no	.....	no	no	no	no	no	18	good	.....	.....
"	1640	.....	.....	.....	"	.....	.....	.....	.....	.....	.....	.....	5 00	.....	"	.....	"	"	"	"	"	11	"	.....	.....
Silver picker	1641	.....	.....	.....	"	.....	.....	.....	.....	.....	.....	.....	2 50	.....	"	.....	"	"	"	"	"	15	"	.....	.....
"	1642	.....	.....	.....	"	.....	.....	.....	.....	.....	.....	.....	2 50	.....	"	.....	"	"	"	"	"	14	"	.....	.....
"	1643	.....	.....	.....	"	.....	.....	.....	.....	.....	.....	.....	2 50	.....	"	.....	"	"	"	"	"	14	"	.....	.....
"	1644	.....	.....	.....	"	.....	.....	.....	.....	.....	.....	.....	4 00	.....	"	.....	"	"	"	"	"	14	"	.....	.....
Spare hand	1645	.....	.....	.....	"	.....	.....	.....	.....	.....	.....	.....	5 00	.....	"	.....	"	"	"	"	"	13	"	.....	.....
"	1646	.....	.....	.....	"	.....	.....	.....	.....	.....	.....	.....	5 00	.....	"	.....	"	"	"	"	"	14	"	.....	.....
"	1647	.....	.....	.....	"	.....	.....	yes	6	.....	7	.....	.....	\$1,000	"	yes	no	"	"	"	"	14	"	.....	.....
"	1648	.....	.....	.....	"	.....	.....	.....	.....	.....	.....	.....	5 00	.....	yes	no	"	"	"	"	"	11	"	.....	.....
"	1649	.....	.....	\$50	\$500	.....	.....	yes	.....	.....	.....	.....	.....	.....	"	\$18 00	yes	"	"	yes	"	14	"	.....	.....
Carpenter	1650	.....	.....	25	no	.....	.....	"	.....	.....	.....	.....	.....	.....	no	6 00	"	"	"	"	yes	14	"	.....	.....
Teamster	1651	.....	.....	25	"	.....	.....	"	.....	.....	.....	.....	.....	.....	no	.....	"	"	"	"	no	7	"	.....	.....
Mason	1652	.....	.....	.....	"	.....	.....	"	.....	.....	.....	.....	.....	.....	yes	5 00	"	"	"	"	"	12	"	.....	.....
Copper cutter	1653	.....	.....	25	"	.....	.....	"	.....	.....	.....	.....	.....	.....	"	10 00	"	"	yes	"	no	10	"	.....	.....
Timberman	1654	.....	.....	.....	"	.....	.....	"	.....	.....	.....	.....	.....	.....	no	.....	"	"	no	"	"	16	"	.....	.....
Clerk	1655	.....	.....	.....	"	.....	.....	bt'r	.....	.....	.....	.....	4 00	.....	yes	6 00	no	"	yes	"	yes	22	"	.....	.....
Brakeman	1656	.....	.....	5	"	.....	.....	yes	.....	.....	.....	.....	4 00	.....	no	.....	"	"	no	"	no	13	"	.....	.....
Blacksmith	1657	.....	.....	7	"	.....	.....	yes	.....	.....	.....	.....	.....	.....	yes	10 00	yes	"	yes	"	yes	15	"	.....	\$100
Blacksmith helper	1658	.....	.....	.....	"	.....	.....	yes	.....	.....	.....	.....	8 00	.....	"	3 00	no	"	"	"	"	14	"	.....	.....
Machinist	1659	.....	.....	.....	"	.....	.....	yes	.....	.....	.....	.....	8 00	.....	1,000	6 00	yes	"	"	"	"	14	"	.....	.....
On break rock	1660	.....	.....	.....	"	.....	.....	"	.....	.....	.....	.....	5 00	.....	500	18 00	no	"	"	yes	"	15	"	.....	.....
Fireman	1661	.....	.....	.....	"	.....	.....	"	.....	.....	.....	.....	5 00	.....	1,000	.....	"	"	"	"	"	14	"	.....	.....
Tramman	1662	.....	.....	.....	"	.....	.....	"	.....	.....	.....	.....	.....	.....	no	6 00	"	"	"	"	"	19	"	.....	.....
"	1663	.....	.....	9	"	.....	.....	yes	.....	.....	.....	.....	4 50	.....	"	6 00	"	"	"	no	"	11	"	.....	.....
Engineer	1664	.....	.....	.....	600	.....	.....	yes	.....	.....	.....	.....	.....	.....	"	6 25	yes	"	"	yes	"	13	"	.....	.....
"	1665	.....	.....	.....	no	.....	.....	"	.....	.....	.....	.....	.....	.....	"	6 00	no	"	"	"	"	18	"	.....	.....
"	1666	.....	.....	.....	1,000	.....	.....	no	.....	.....	.....	.....	.....	.....	"	12 00	yes	"	yes	"	no	7	poor	.....	.....
Mining captain.	1667	.....	.....	120	no	.....	.....	yes	.....	.....	.....	.....	.....	.....	"	25 00	"	"	"	"	"	10	good	.....	160
"	1668	.....	.....	27	"	.....	.....	"	.....	.....	.....	.....	.....	.....	"	6 00	"	"	yes	"	yes	14	"	.....	.....
"	1669	.....	.....	25	"	.....	.....	"	.....	.....	.....	.....	.....	.....	"	6 00	"	"	yes	"	no	8	"	.....	.....
Laborer	1670	"	"	4 00	2,000	6 00	no	"	no	yes	"	14	"	
"	1671	"	"	4 00	1,000	5 00	no	"	no	yes	"	13	"	

"	1672	10	2,000	18	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"
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\$ Refused.

TABLE No. 7.—Continued.

Occupation.	Line number.	Age.	Nativity.	Nativity of parents.	How long in U. S., if foreign born.—(Years.)	Married or single.	How many children in family.	How many attend school.	How many depend on you for support.	How many years at present occupation.	How long with present employer.—(Years.)	Number of months employed during year.	How many hours for a day's work.	Wages paid.	Annual earnings.	Are you paid cash or trade.	How often are you paid.	Amount saved during the year.	How do wages compare with former years in this country.	What occupation did you follow in the old country.	Wages received in the old country.
Laborer.....	1717	40	Germany	Germany	20	s	..	..	..	20	20 yrs	12	10	\$37 00	\$444 00	c	m	\$150	not so good	farmer	\$11 00 per mo
".....	1718	40	"	"	16	s	..	..	..	16	16	12	10	37 00	444 00	c	m	230	same	"	8 00 "
".....	1719	40	"	"	6	m	3	3	4	24	8	12	10	37 00	444 00	c	m	100	less	"	7 00 "
".....	1720	36	"	"	9	m	8	..	4	20	8	12	10	37 00	444 00	c	m	120	better	laborer	12 00 "
".....	1721	22	"	"	20	s	..	..	2	10	8	12	10	37 00	444 00	c	m	...	...	...	...
Mason.....	1722	50	England	England	22	s	..	..	..	20	13	12	10	60 00	720 00	c	m	800	same	mason	20 00 per mo
".....	1723	37	"	"	14	m	2	..	8	14	14	12	10	60 00	720 00	c	m	800	better	"	17 00 "
Miner.....	1724	36	"	"	12	m	6	8	7	22	10	12	10	50 00	600 00	c	m	175	same	miner	15 00 "
".....	1725	36	"	"	16	m	4	2	9	24	16	10	10	45 00	450 00	c	m	...	less	"	15 00 "
".....	1726	60	"	"	25	m	4	8	4	45	12	12	10	50 00	600 00	c	m	240	not so good	"	15 00 "
".....	1727	38	"	"	16	m	8	4	9	28	16	12	10	45 00	540 00	c	m	...	less	"	15 00 "
".....	1728	38	"	"	10	m	..	..	..	28	8	12	10	50 00	600 00	c	m	400	same	"	17 00 "
".....	1729	20	"	"	4	m	1	..	2	20	1	12	10	50 00	600 00	c	m	200	not so good	"	17 00 "
".....	1730	24	"	"	4	s	..	..	..	14	1	12	10	50 00	600 00	c	m	200	better	"	15 00 "
".....	1731	37	"	"	17	m	5	4	6	25	17	12	10	50 00	600 00	c	m	250	not so good	"	17 00 "
".....	1732	25	"	"	4	s	..	..	..	11	4	12	10	45 00	540 00	c	m	200	same	"	15 00 "
".....	1733	30	"	"	15	m	3	..	4	15	15	12	10	45 00	540 00	c	m	100	better	"	15 00 "
".....	1734	45	"	"	14	m	6	3	7	14	14	12	10	45 00	540 00	c	m	...	not so good	"	17 00 "
".....	1735	28	"	"	11	m	1	..	2	12	9	12	10	50 00	600 00	c	m	250	"	"	17 00 "
".....	1736	53	"	"	30	m	..	..	1	12	12	12	10	45 00	540 00	c	m	200	"	"	17 00 "
".....	1737	40	"	"	38	m	4	2	5	12	12	12	10	50 00	600 00	c	m	200	better	"	15 00 "
".....	1738	40	"	"	15	m	..	..	1	25	15	12	10	45 00	540 00	c	m	240	same	"	15 00 "
".....	1739	43	"	"	25	m	6	5	7	30	1	12	10	50 00	600 00	c	m	150	"	"	15 00 "
".....	1740	30	"	"	6	m	2	2	3	20	6	12	10	45 00	540 00	c	m	200	not so good	"	15 00 "
".....	1741	52	"	"	20	m	6	..	7	10	8	12	10	50 00	600 00	c	m	270	same	"	15 00 "
".....	1742	50	"	"	30	m	4	..	1	42	6	12	10	50 00	600 00	c	m	340	"	"	17 00 "
".....	1743	51	"	"	17	m	8	..	1	40	10	12	10	50 00	600 00	c	m	300	less	"	15 00 "
".....	1744	45	"	"	24	m	4	3	5	15	7	12	10	50 00	600 00	c	m	100	same	"	15 00 "
".....	1745	55	"	"	22	m	4	1	2	41	8	12	10	50 00	600 00	c	m	250	less	"	17 00 "
".....	1746	39	"	"	1	m	5	8	6	23	1	11	10	50 00	550 00	c	m	...	same	"	15 00 "
".....	1747	37	"	"	13	m	8	6	9	26	8	12	10	50 00	525 00	c	m	120	not ans'w'd	"	15 00 "
".....	1748	24	U. S.	"	...	m	1	..	2	14	14	12	10	50 00	600 00	c	m	250	not so good	"	not ans'w'd
".....	1749	31	Germany	Germany	...	m	1	..	3	20	20	12	10	45 00	540 00	c	m	250	same	not ans'w'd	not ans'w'd

"	1750 30	"	England	---	m	3	1	4	13 3	"	12	10	50 00	"	600 00	c	m	200	better	---	---	---
"	1751 38	"	"	---	s	---	---	---	10 1	"	12	10	50 00	"	600 00	c	m	800	less	---	---	---
"	1752 30	"	"	---	m	1	---	---	10 10	"	12	10	45 00	"	540 00	c	m	200	better	---	---	---
"	1753 23	"	"	---	m	---	---	---	6 6	"	12	10	45 00	"	540 00	c	m	200	"	---	---	---
"	1754 26	"	"	---	m	2	1	3	10 10	"	12	10	45 00	"	540 00	c	m	---	"	---	---	---
"	1755 40	"	Germany	---	m	4	2	5	8 4	"	12	10	45 00	"	540 00	c	m	---	"	---	---	---
"	1756 23	"	Ireland	---	m	1	---	2	13 10	"	12	10	45 00	"	540 00	c	m	150	less	---	---	---
"	1757 30	England	England	9	m	2	---	3	16 9	"	12	10	45 00	"	540 00	c	m	+	same	15 00 per mo	---	---
"	1758 30	"	"	4	m	1	---	2	21 4	"	12	10	45 00	"	540 00	c	m	100	better	14 00 "	---	---
"	1759 38	"	"	14	m	2	1	8	20 11	"	12	10	45 00	"	540 00	c	m	160	same	15 00 "	---	---
"	1760 41	"	"	20	m	6	4	7	30 14	"	12	10	50 00	"	600 00	c	m	160	"	15 00 "	---	---
"	1761 39	"	"	14	m	---	---	1	21 2	"	12	10	50 00	"	600 00	c	m	800	not so good	40 00 "	---	---
"	1762 37	"	"	8	s	---	---	---	21 3	"	12	10	45 00	"	540 00	c	m	+	refused	15 00 "	---	---
"	1763 31	"	"	9	m	---	---	---	10 9	"	12	10	50 00	"	600 00	c	m	+	better	---	---	---
"	1764 29	"	"	18	m	1	1	2	18 13	"	12	10	45 00	"	540 00	c	m	200	"	---	---	---
"	1765 31	"	"	2	s	---	---	---	9 4	"	12	10	45 00	"	540 00	c	m	100	same	13 00 per mo	---	---
"	1766 23	"	"	5	s	---	---	---	16 1	"	12	10	45 00	"	540 00	c	m	+	not so good	17 00 "	---	---
"	1767 25	"	"	8	s	---	---	---	15 8	"	12	10	45 00	"	540 00	c	m	300	less	15 00 "	---	---
"	1768 42	"	"	20	m	3	2	4	30 20	"	12	8	50 00	"	600 00	c	m	250	not so good	15 00 "	---	---
"	1769 37	"	"	11	m	5	4	6	20 11	"	12	10	45 00	"	540 00	c	m	100	"	15 00 "	---	---
"	1770 10	"	"	20	m	9	5	10	23 10	"	12	10	50 00	"	600 00	c	m	---	same	15 00 "	---	---
"	1771 38	"	"	14	m	6	5	7	23 14	"	12	10	50 00	"	600 00	c	m	---	"	17 00 "	---	---
"	1772 32	"	"	6	m	2	---	3	18 6	"	12	10	45 00	"	540 00	c	m	300	better	15 00 "	---	---
"	1773 12	"	"	20	m	3	3	4	30 12	"	12	10	45 00	"	540 00	c	m	200	same	17 00 "	---	---
"	1774 60	"	"	40	m	2	---	1	43 20	"	12	10	45 00	"	540 00	c	m	800	not so good	17 50 "	---	---
"	1775 38	"	"	21	m	3	---	4	20 18	"	12	10	45 00	"	540 00	c	m	120	less	17 50 per mo	---	---
"	1776 50	"	"	42	m	4	2	5	23 15	"	12	10	45 00	"	540 00	c	m	---	not so good	---	---	---
"	1777 32	"	"	20	m	1	---	2	16 16	"	12	10	45 00	"	540 00	c	m	---	"	---	---	---
"	1778 32	"	"	11	m	1	---	2	20 10	"	12	10	45 00	"	540 00	c	m	200	same	15 00 per mo	---	---
"	1779 50	"	"	20	m	5	2	3	37 20	"	12	10	45 00	"	540 00	c	m	450	"	---	---	---
"	1780 50	"	"	20	m	4	1	4	40 8	"	12	10	50 00	"	600 00	c	m	350	"	15 00 "	---	---
"	1781 38	"	"	4	m	3	1	4	23 4	"	12	10	45 00	"	540 50	c	m	175	"	15 00 "	---	---
"	1782 34	"	"	15	m	3	1	4	20 15	"	12	10	45 00	"	540 00	c	m	---	"	15 00 "	---	---
"	1783 25	"	"	8	m	2	---	3	8 8	"	12	10	45 00	"	540 00	c	m	---	"	15 00 "	---	---
"	1784 20	"	"	4	s	---	---	---	4 4	"	12	10	45 00	"	540 00	c	m	---	"	---	---	---
"	1785 31	"	"	9	m	4	---	5	21 2	"	12	10	50 00	"	600 00	c	m	250	better	17 00 per mo	---	---
"	1786 38	"	"	15	m	6	4	7	23 12	"	12	10	50 00	"	600 00	c	m	---	same	17 00 "	---	---
"	1787 39	"	"	15	m	2	1	8	27 7	"	12	10	50 00	"	600 00	c	m	---	"	17 00 "	---	---
Engineer	1788 23	"	"	14	s	---	---	8	4 4	"	12	10	55 00	"	600 00	c	m	150	better	---	---	---
"	1789 42	"	"	15	m	3	8	4	23 15	"	12	10	50 00	"	600 00	c	m	150	less	20 00 per mo	---	---
"	1790 32	Ireland	Ireland	16	s	---	---	---	16 16	"	12	10	50 00	"	600 00	c	m	800	same	15 00 "	---	---
Laborer	1791 20	U.S.	England	---	s	---	---	---	8 8	"	12	10	35 00	"	420 00	c	m	120	not ans'w'd	---	---	---
"	1792 16	"	Ireland	---	s	---	---	---	6 6	"	12	10	30 00	"	380 00	c	m	100	better	---	---	---
"	1793 24	England	England	20	s	---	---	---	10 10	"	12	10	39 00	"	468 00	c	m	120	"	---	---	---
"	1794 22	Germany	Germany	20	s	---	---	---	8 8	"	12	10	39 00	"	468 00	c	m	---	not ans'w'd	---	---	---

† Refused.

TABLE NO. 7.—Continued.

Occupation.	Line number.	How many hours for a day's work in the old country.	Amount of money at interest or in the bank.	If foreign born, how much money did you have on arrival in U. S.	Do you own your home. If so, its value.	If mortgaged, amount of mortgage.	Rate of interest.	Are you as well off as five years ago.	Loss of time.			If renting home, monthly rental.	If boarding, cost per week, including room.	Life insurance, how much.	Do you belong to a benefit society.	Weekly benefit in case of sickness or accident.	Have you a sewing machine.	Have you a piano.	Have you an organ.	Do you take a newspaper.			Age began work.	State of health then.	State of health now.	Amount of relief rendered friends in the old country.	Amount of money furnished to friends for passage to U. S.	
									From sickness—(Days.)	Inability to obtain work.—(Days.)	Causes not stated.—(Days.)									Daily.	Weekly.	Monthly.						
Laborer	1717	11	+	\$17	no			no				\$4 00	\$1,000	yes	\$5 00	no	no	no	no	yes	no	no	13	good	good			
"	1718	10	++	9	"			yes				4 00			"	5 00	yes	"	"	"	no	"	"	14	"	"		
"	1719	10		10	"			no						1,000	"	5 00	"	"	"	"	yes	"	"	16	"	"		
"	1720	10			"			yes							"	5 00	"	"	"	"	"	"	16	"	"			
"	1721				"										"	5 00	"	"	"	"	"	"	12	"	"			
Mason	1722	10	+	15	"			"				4 00	3,000	"	15 00	no	"	"	"	yes	yes	yes	10	"	"			
"	1723	10		16	"			"						1,000	"	5 00	yes	"	"	"	"	no	no	14	"	"		
Miner	1724	8		7	"			"							"	5 00	"	"	yes	"	"	"	12	"	"			
"	1725	8	\$3,000	15	"			no	52						"	5 00	"	"	yes	no	yes	no	14	"	"			
"	1726	8		25	"			"							"	5 00	"	"	"	"	"	"	10	"	"			
"	1727	8	500	25	"			yes						1,000	"	5 00	"	"	yes	"	yes	"	10	"	"	\$400		
"	1728	8		30	"			no					2,000	"	"	10 00	"	"	"	"	"	"	10	"	"	240		
"	1729	8		13	"			yes				4 00	1,000	"	"	10 00	yes	"	"	"	"	"	10	"	"			
"	1730	6	2,000	25	"			no							"	10 00	yes	"	"	"	"	"	12	"	"	\$150		
"	1731	8			"			yes							"	5 00	"	"	"	yes	yes	yes	14	"	"			
"	1732	8		13	"			"				4 00			"	5 00	no	"	"	"	yes	no	14	"	"			
"	1733	10		25	"			"							"	5 00	yes	"	"	"	"	"	10	"	"			
"	1734	10		40	"			"							"	5 00	"	"	"	"	"	"	15	"	"			
"	1735	10		35	"			no							"	5 00	"	"	"	"	"	"	13	"	"			
"	1736	10		10	"			"							"	5 00	"	"	"	"	yes	no	14	"	"			
"	1737	10		17	"			yes							"	5 00	"	"	"	"	yes	no	14	poor	poor			
"	1738	8		25	"			"							"	5 00	"	"	"	"	"	"	13	good	good			
"	1739	8	3,000	17	"			"						1,000	"	5 00	"	"	"	"	yes	yes	13	poor	poor			
"	1740	8		15	"			"							"	5 00	"	"	"	"	"	"	10	"	"			
"	1741	8	3,000	10	"			no						2,000	"	10 00	"	"	yes	"	"	"	12	"	"			
"	1742	10	+	125	"			yes							"	5 00	"	"	"	"	"	"	8	"	"			
"	1743	8	+	+	"			"							"	5 00	"	"	yes	"	"	"	11	"	"			
"	1744	8	+	35	"			no						1,000	"	5 00	"	"	"	"	"	yes	10	"	"			
"	1745	8	700	30	"			yes						1,000	"	10 00	"	"	"	"	"	"	15	"	"			
"	1746	8		35	"			"				4 00			"	5 00	no	"	"	"	"	no	16	"	"	240		
"	1747	8	500	43	"			no	89					1,000	"	10 00	yes	"	yes	"	"	"	12	"	"	250		
"	1748				"			"						1,000	"	5 00	"	"	"	"	yes	no	14	"	"			
"	1749				"			yes						1,000	"	15 00	"	"	"	"	no	yes	11	"	"			

TABLE NO. 7.—Continued.

Occupation.	Line number.	Age.	Nativity.	Nativity of parents.	How long in U. S., if foreign born.—(Years.)	Married or single.	How many children in family.	How many attend school.	How many depend on you for support.	How many years at present occupation.	How long with present employer.—(Years.)	Number of months employed during year.	How many hours for a day's work.	Wages paid.	Annual earnings.	Are you paid cash or trade.	How often are you paid.	Amount saved during the year.	How do wages compare with former years in this country.	What occupation did you follow in the old country.	Wages received in the old country.
Surface boss.....	1795 40	Ireland.....	Ireland.....	Ireland.....	20	m	4	3	4	15 15 yrs	12	10	10 80 00 pr m	\$900 00	900 00	c	m	\$400	better	not ans'w'd	not ans'w'd
Carpenter.....	1796 50	France.....	France.....	France.....	30	m	4	3	4	25 8 "	12	10	10 60 00 "	720 00	720 00	c	m	210	"	mining	\$15 00 per mo
Mining captain.....	1797 40	England.....	England.....	England.....	40	m	1	3	1	40 20 "	12	10	10 65 00 "	1,200 00	1,200 00	c	m	800	"	blacksmith	17 50 "
Blacksmith.....	1798 60	"	"	"	40	m	7	3	1	40 20 "	12	10	10 65 00 "	780 00	780 00	c	m	800	"	mining capt.	40 00 "
Superintendent.....	1799 60	"	"	"	25	m	1	1	1	10 20 "	12	6	6 250 00 "	3,000 00	3,000 00	c	m	2,000	"		
Lander.....	1800 50	Ireland.....	Ireland.....	Ireland.....	20	m	5	1	4	20 8 "	12	10	10 98 00 "	450 00	450 00	c	m	100	same	farmer	50 00 per yr
Blacksmith.....	1801 32	"	"	"	18	m	2	2	3	14 1 "	12	10	10 55 00 "	600 00	600 00	c	m	300	"	blacksmith	15 00 per mo
Teamster.....	1802 42	Canada.....	Canada.....	Canada.....	21	m	4	3	5	3 3 "	12	10	10 45 00 "	540 00	540 00	c	m	125	"	farmer	10 00 "
Fireman.....	1803 36	U. S.....	U. S.....	U. S.....	...	m	4	4	5	12 2 "	12	10	10 50 00 "	600 00	600 00	c	m	175	"		
Machinist.....	1804 27	"	"	England.....	...	s	...	...	1	1 m	12	10	10 45 00 "	540 00	540 00	c	m	...	"		
Surface boss.....	1805 54	England.....	England.....	"	33	m	1	1	2	2 2 yrs	12	10	10 65 00 "	780 00	780 00	c	m	300	"	miner	15 00 per mo
Timberman.....	1806 37	"	"	"	15	m	4	1	5	15 2 "	12	10	10 55 00 "	600 00	600 00	c	m	150	higher	"	15 00 "
Drill boy.....	1807 16	U. S.....	U. S.....	"	...	s	...	...	...	1 1 "	12	10	10 22 00 "	204 00	204 00	c	m	...	same		
"	1808 18	"	"	"	...	s	...	...	...	1 1 "	12	10	10 22 00 "	204 00	204 00	c	m	...	"		
"	1809 15	"	"	U. S.....	...	s	...	...	...	1 1 "	12	10	10 22 00 "	204 00	204 00	c	m	...	"		
"	1810 16	"	"	"	...	s	...	...	...	2 2 "	12	10	10 22 00 "	204 00	204 00	c	m	...	"		
"	1811 16	"	"	"	...	s	...	...	...	1 1 "	12	10	10 22 00 "	204 00	204 00	c	m	...	"		
"	1812 19	"	"	"	...	s	...	...	...	7 3 "	12	10	10 38 00 "	456 00	456 00	c	m	...	"		
"	1813 14	Finland.....	Finland.....	Ireland.....	6	s	...	...	...	2 2 "	12	10	10 22 00 "	204 00	204 00	c	m	...	"		
"	1814 16	"	"	Finland.....	6	s	...	...	...	2 2 "	12	10	10 22 00 "	204 00	204 00	c	m	...	"		
Miner.....	1815 37	Norway.....	Norway.....	Norway.....	16	m	5	...	6	20 4 mo	12	10	10 50 00 "	600 00	600 00	c	m	...	"	miner	8 00 per mo
"	1816 16	"	"	"	8	m	2	2	3	35 2 yrs	12	10	10 50 00 "	600 00	600 00	c	m	225	"	"	16 00 "
"	1817 10	Ireland.....	Ireland.....	Ireland.....	26	m	3	2	3	25 2 "	12	10	10 50 00 "	600 00	600 00	c	m	...	"	"	20 00 "
"	1818 36	"	"	"	24	s	...	...	1	6 1 "	12	10	10 50 00 "	600 00	600 00	c	m	200	"		
"	1819 30	"	"	"	26	m	11	4	8	35 1 "	12	10	10 50 00 "	600 00	600 00	c	m	600	"	miner	15 00 per mo
"	1820 57	U. S.....	U. S.....	England.....	...	s	...	...	2	12 3 "	12	10	10 50 00 "	600 00	600 00	c	m	200	"		
"	1821 37	"	"	"	...	m	1	...	...	3 "	12	10	10 50 00 "	600 00	600 00	c	m	...	"		
"	1822 38	"	"	Ireland.....	...	s	...	...	...	9 1 "	12	10	10 50 00 "	600 00	600 00	c	m	200	higher		
"	1823 50	"	"	"	...	s	...	...	...	6 1 "	12	10	10 50 00 "	600 00	600 00	c	m	200	same	miner	15 00 per mo
"	1824 57	England.....	England.....	England.....	10	s	...	...	...	14 1 wk	12	10	10 50 00 "	600 00	600 00	c	m	700	not ans'w'd		
Mining captain.....	1825 35	"	"	"	25	m	...	...	1	15 10 yrs	12	10	10 100 00 "	1,200 00	1,200 00	c	m	225	same	miner	15 00 per mo
Miner.....	1826 36	"	"	"	5	s	...	...	...	18 2 "	12	10	10 50 00 "	600 00	600 00	c	m	225	same	miner	15 00 per mo
"	1827 40	"	"	"	20	s	...	...	...	25 2 "	12	10	10 50 00 "	600 00	600 00	c	m	175	same		16 00 "

[illegible]

*** Father takes his wages.**

TABLE No. 7.—Continued.

Occupation.	Line number.	Age.	Native.	Relativity of parents.	How long in U. S., if foreign born.—(Years.)	Married or single.	How many children in family.	How many attend school.	How many depend on you for support.	How many years at present occupation.	How long with present employer.—(Years.)	Number of months employed during year.	How many hours for a day's work.	Wages paid.	Annual earnings.	Are you paid cash or trade.	How often are you paid.	Amount saved during the year.	How do wages compare with former years in this country.	What occupation did you follow in the old country.	Wages received in the old country.
Miner	1873 21	Poland	Poland	Poland	6	s	8	3	9	1	1	12	10 947 00 pr m	\$54 00	\$54 00	s	m	*	same	farmer	father
Laborer	1874 41	Germany	Germany	Germany	37	m	8	3	9	1	1	12	10 50 00	\$00 00	\$00 00	s	m	*	same	not ans'd	not answered
"	1875 15	Canada	Canada	Canada	11	m	8	3	1	2 14	1	12	10 35 00	\$20 00	\$20 00	s	m	\$200	"	laborer	\$18 00 per mo
"	1876 32	U. S.	U. S.	Ireland	13	s	8	3	1	4 12	1	12	10 45 00	\$40 00	\$40 00	s	m	175	"	not ans'd	7 50
"	1877 38	Ireland	Ireland	"	13	s	8	3	1	1 12	1	12	10 38 00	\$38 00	\$38 00	s	m	*	"	farmer	7 50
"	1878 45	"	"	"	20	m	8	2	4	1 6	1	12	10 30 00	\$00 00	\$00 00	s	m	500	not ans'd	miner	15 00
"	1879 40	England	England	England	40	m	8	2	1	1 1	1	12	10 45 00	\$40 00	\$40 00	s	m	*	same	not ans'd	not answered
"	1880 17	Poland	Poland	Poland	6	s	7	3	5	4 10	1	4	10 40 00	\$00 00	\$00 00	s	m	600	"	farmer	5 00 per mo
"	1881 46	"	"	"	11	m	8	3	4	10 10	1	12	10 37 00	\$34 00	\$34 00	s	m	*	"	laborer	7 00
"	1882 34	"	"	"	11	m	8	3	3	8 3	1	12	10 35 00	\$00 00	\$00 00	s	m	*	"	miner	not ans'd
Drill boy	1883 17	England	England	England	7	s	8	3	3	4 4	1	12	10 35 00	\$00 00	\$00 00	s	m	*	"	not ans'd	not ans'd
"	1884 15	Finland	Finland	Finland	8	s	8	3	3	4 4	1	12	10 35 00	\$00 00	\$00 00	s	m	*	"	"	"
"	1883 17	U. S.	"	Ireland	"	s	8	3	3	4 4	1	12	10 35 00	\$00 00	\$00 00	s	m	*	"	"	"
"	1883 18	"	"	"	"	s	8	3	3	4 4	1	12	10 35 00	\$00 00	\$00 00	s	m	*	"	"	"
"	1887 15	"	"	"	"	s	8	3	3	4 4	1	12	10 35 00	\$00 00	\$00 00	s	m	*	"	"	"
"	"	"	"	U. S.	"	s	8	3	3	4 4	1	12	10 35 00	\$00 00	\$00 00	s	m	*	"	"	"
"	"	"	"	Ireland	"	s	8	3	3	4 4	1	12	10 35 00	\$00 00	\$00 00	s	m	*	"	"	"
"	"	"	"	"	"	s	8	3	3	4 4	1	12	10 35 00	\$00 00	\$00 00	s	m	*	"	"	"
"	"	"	"	U. S.	"	s	8	3	3	4 4	1	12	10 35 00	\$00 00	\$00 00	s	m	*	"	"	"
"	"	"	"	Austria	"	s	8	3	3	4 4	1	12	10 35 00	\$00 00	\$00 00	s	m	*	"	"	"
Tramman	"	"	"	"	2	s	8	3	3	4 4	1	12	10 35 00	\$04 00	\$04 00	s	m	200	not ans'd	farmer	50 00 per year
"	"	"	"	Poland	5	m	4	5	4	1 1	1	12	10 43 00	\$04 00	\$04 00	s	m	200	"	laborer	22 00
"	"	"	"	Germany	10	m	5	5	5	5 5	1	12	10 43 00	\$03 00	\$03 00	s	m	200	"	not ans'd	not ans'd
Brakeman	"	"	"	Ireland	"	s	5	5	5	5 5	1	12	10 50 00	\$00 00	\$00 00	s	m	175	"	farmer	15 00 per mo
Fireman	"	"	"	France	5	m	1	1	2	2 2	1	12	10 45 00	\$40 00	\$40 00	s	m	*	"	"	7 50
Engineer	"	"	"	Ireland	5	s	1	1	3	3 3	1	12	10 47 00	\$54 00	\$54 00	s	m	*	not ans'd	"	"
Miner	"	"	"	U. S.	"	s	8	3	3	4 4	1	12	10 40 00	\$40 00	\$40 00	s	m	200	same	"	"
"	"	"	"	Ireland	6	s	8	3	3	7 3	1	12	10 47 00	\$54 00	\$54 00	s	m	500	"	brewer	16 00 per mo
"	"	"	"	Poland	7	m	7	7	5	7 7	1	12	10 30 00	\$32 00	\$32 00	s	m	500	"	miner	15 00
"	"	"	"	Ireland	15	m	7	7	4	13	1	12	10 47 00	\$54 00	\$54 00	s	m	500	not ans'd	farmer	7 50 per mo
"	"	"	"	"	24	m	9	9	7	24 13	1	13	10 47 00	\$54 00	\$54 00	s	m	*	same	"	"

[illegible]

*** Gives wages to his father.**

† **TABLE 1.**

TABLE NO. 7.—Continued.

Occupation.	Line number.	How many hours for a day's work in the old country.	Amount of money at interest or in the bank.	If foreign born, how much money did you have on arrival in U. S.	Do you own your home. If so, its value.	If mortgaged, amount of mortgage.	Rate of interest.	Are you as well off as five years ago.	Loss of time.			If renting home, monthly rental.	If boarding, cost per week, including room.	Life insurance, how much.	Do you belong to a benevolent society.	Weekly benefit in case of sickness or accident.	Have you a sewing machine.	Have you a piano.	Have you an organ.	Do you take a newspaper.			Age began work.	State of health then.	State of health now.	Amount of relief rendered friends in the old country.	Amount of money furnished to friends for passage to U. S.
									From sickness.—(Days.)	Inability to obtain work.—(Days.)	Causes not stated.—(Days.)									Daily.	Weekly.	Monthly.					
Miner.....	1873	12			no			yes			\$4 00				yes	\$6 00	no	no	no	no	no	no	14	good			
Laborer.....	1874				\$50			"							"	\$6 00	yes	no	no	no	no	no	15	"			
".....	1875	10			no			"				\$4 50			"	\$6 00	no	no	no	no	no	no	12	"			
".....	1876	8			"			"			3 00	4 50			"	\$6 00	yes	no	no	no	no	no	15	"			
".....	1877				"			"							"	\$6 00	no	no	no	no	no	12	"				
".....	1878	12		\$25	"			"			2 00				"	\$6 00	"	no	no	no	no	no	12	"			
".....	1879				"			"							"	\$6 00	yes	no	no	no	no	no	17	"			
".....	1880				"			"							"	\$6 00	no	no	no	no	no	no	16	"			
".....	1881				"			yes		208	2 00				"	\$6 00	yes	no	no	no	no	no	14	"			
".....	1882	10		12	"			"			8 00				"	\$6 00	"	no	no	no	no	no	12	"			
Drill boy.....	1883	8			"			"							"	\$6 00	no	no	no	no	no	no	12	"			
".....	1884				"			"							"	\$6 00	"	no	no	no	no	no	12	"			
".....	1885				"			"							"	\$6 00	"	no	no	no	no	no	13	"			
".....	1886				"			"							"	\$6 00	"	no	no	no	no	no	14	"			
".....	1887				"			"							"	\$6 00	"	no	no	no	no	no	12	"			
".....	1888				"			"							"	\$6 00	"	no	no	no	no	no	11	"			
".....	1889				"			"			2 00				"	\$6 00	"	no	no	no	no	no	11	"			
".....	1890				"			"							"	\$6 00	"	no	no	no	no	no	13	"			
".....	1891				"			"							"	\$6 00	"	no	no	no	no	no	14	"			
".....	1892				"			"							"	\$6 00	"	no	no	no	no	no	15	"			
Tramman.....	1893		\$400	8	"			yes				4 00			"	\$6 00	"	no	no	no	no	no	10	"		\$25	
".....	1894	12		17	"			"			2 00				"	\$6 00	yes	no	no	no	no	no	12	"			
".....	1895				"			"			2 00				"	\$6 00	"	no	no	no	no	no	14	"			
Brakeman.....	1896				"			"		260		4 50			"	\$6 00	no	no	no	no	no	no	20	"			
Fireman.....	1897	14			"			"			3 00				"	\$6 00	"	no	no	no	no	no	10	"			
Engineer.....	1898	12			"			"			3 00				"	\$6 00	"	no	no	no	no	no	12	"			
Miner.....	1899				"			"							"	\$6 00	"	no	no	no	no	no	13	"			
".....	1900				"			yes							"	\$6 00	"	no	no	no	no	no	17	"			
".....	1901				"			"							"	\$6 00	"	no	no	no	no	no	12	"			
".....	1902				"			yes			2 00				"	\$6 00	"	no	no	no	no	no	12	"			
".....	1903	8			"			"			3 00				"	\$6 00	yes	no	no	no	no	no	13	"			
".....	1904				"			"			2 00				"	\$6 00	"	no	no	no	no	no	19	"			
".....	1905	12			"			"			3 00		\$1,000		"	\$6 00	no	no	no	no	no	no	12	"			

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[illegible]

\$Refused.

TABLE NO. 7.—Continued.

Occupation.	Line number.	Age.	Nativity.	Nativity of parents.	How long in U. S., if foreign born.—(Years.)	Married or single.	How many children in family.	How many attend school.	How many depend on you for support.	How many years at present occupation.	How long with present employer.—(Years.)	Number of months employed during year.	How many hours for a day's work.	Wages paid.	Annual earnings.	Are you paid cash or trade.	How often are you paid.	Amount saved during the year.	How do wages compare with former years in this country.	What occupation did you follow in the old country.	Wages received in the old country.
Drill boy	1951	17	U. S.	Ireland		s					4 yrs	12	10	\$25 00 pr m	\$300 00	c	m		same		
"	1952	14	"	"		s					1	12	10	25 00 "	300 00	c	m		"		
"	1953	15	"	"		s			2		2	12	10	25 00 "	300 00	c	m		"		
"	1954	14	"	England		s					2	12	10	25 00 "	300 00	c	m		"		
"	1955	15	Norway	Norway	10	s					3	12	10	25 00 "	300 00	c	m				
Miner	1956	30	"	"	17	m	2	1	3		16	12	10	50 00 "	600 00	c	m	*	same		
"	1957	18	U. S.	Germany		s					4	12	10	50 00 "	600 00	c	m		"		
"	1958	20	"	Ireland		s					3	12	10	47 00 "	564 00	c	m		less		
"	1959	36	Ireland	"	22	m	6	1	4		18	12	10	47 00 "	564 00	c	m		same		
"	1960	45	"	"	37	m	5		6		10	12	10	47 00 "	564 00	c	m				
"	1961	24	"	"	8	m	1		2		8	12	10	45 00 "	540 00	c	m	200	"	farmer	not answered
"	1962	40	"	"	17	m	4	1	4		16	11½	10	47 00 "	540 50	c	m	125	"	"	
"	1963	48	England	England	30	m	6	3	7		35	12	10	48 00 "	576 00	c	m		less	miner	\$15 00 per mo
"	1964	63	"	"	33	m	7	1	6		50	6	10	47 00 "	282 00	c	m		same	"	20 00 "
"	1965	50	"	"	30	m	4		4		35	12	10	47 00 "	564 00	c	m	125	"	"	15 00 "
"	1966	37	"	"	18	m	3		4		25	12	10	47 00 "	564 00	c	m		"	"	15 00 "
"	1967	40	"	"	9	m			1		30	12	10	50 00 "	600 00	c	m	200	"	"	15 00 "
"	1968	40	"	"	18	m	4	1	4		28	12	10	47 00 "	564 00	c	m		not ans'd	"	15 00 "
"	1969	30	"	"	8	m	3		4		15	12	10	47 00 "	564 00	c	m	100	less	"	15 00 "
"	1970	30	Finland	Finland	8	s					8	7½	10	50 00 "	375 00	c	m	100	same	farmer	20 00 per yr
"	1971	36	"	"	16	m			1		2	12	10	45 00 "	540 00	c	m		"	"	100 00
"	1972	27	"	"	7	m	1		1		7	12	10	60 00 "	600 00	c	m	150	"	"	100 00 "
"	1973	45	"	"	8	m	6	2	7		7	12	10	55 00 "	660 00	c	m		higher	"	20 00 "
Laborer	1974	50	Ireland	Ireland	33	m	8	3	6		3	12	10	39 00 "	468 00	c	m	200	same	not ans'd	not answered
"	1975	22	U. S.	"		s					6	12	10	50 00 "	600 00	c	m	200	higher	"	
"	1976	21	"	"		s					1	12	10	83 00 "	396 00	c	m	*	same	"	
"	1977	25	"	England		m	2		3		12	12	10	50 00 "	600 00	c	m	200	"	"	
Trammer	1978	38	Austria	Austria	2 m	s					2 m	2	10	42 00 "	84 00	c	m		same	farmer	13 00 per mo
"	1979	35	"	"	1	s					1	12	10	42 00 "	504 00	c	m		"	"	13 00 "
"	1980	22	Finland	Finland	6	m	1		2		2	12	10	54 00 "	648 00	c	m		"	"	20 00 "
"	1981	25	Norway	Norway	1	s					1	12	8	42 00 "	504 00	c	m	175	"	fishing	12 00 "
Carpenter	1982	16	U. S.	U. S.		s					½	3	10	28 00 "	84 00	c	m		"	"	
"	1983	60	Canada	Canada	8	m	7	2	6		41	12	10	58 00 "	696 00	c	m	200	higher	carpenter	26 00 per mo

"	1984 45	"	"	"	"	26	m	5	4	2	4	6	6	6	12	10	110	00	"	1,320	00	c	m	360	same	laborer	26 00	"
Mason	1985 17	"	"	"	"	4	s	7	3	2	6	3	3	3	12	10	26	00	"	812	00	c	m	100	"	mason	20 00 per mo	---
"	1986 43	"	"	"	"	4	m	2	6	15	8	15	4	4	12	10	69	00	"	720	00	c	m	880	"	"	26 00	"
Machinist	1987 30	England	England	---	---	5	m	2	3	16	2	16	5	2	12	10	65	00	"	780	00	c	m	240	less	miner	15 00	"
"	1988 33	---	---	---	---	25	m	5	2	40	2	40	8	8	12	10	45	00	"	540	00	c	m	200	same	machinist	20 00 per mo	---
Supply clerk	1989 30	U. S.	U. S.	---	---	---	m	4	2	8	5	8	8	8	12	10	60	00	"	720	00	c	m	200	same	mine capt'n	40 00	"
"	1990 61	England	England	---	---	37	m	11	2	10	2	10	10	10	12	10	50	00	"	600	00	c	m	800	better	miner	15 00	"
Fireman	1991 64	"	"	---	---	80	m	6	1	14	1	14	14	14	12	10	60	00	"	720	00	c	m	200	same	---	---	---
"	1992 56	"	"	---	---	23	m	4	6	18	5	18	9	9	12	10	40	00	"	450	00	c	m	75	same	---	---	---
"	1993 46	Germany	Germany	---	---	37	m	2	1	2	3	2	11	11	12	10	40	00	"	480	00	c	m	225	---	---	---	---
Timberman	1994 31	Finland	Finland	---	---	9	m	4	1	1	5	1	2	2	12	10	48	00	"	576	00	c	m	---	"	laborer	40 00 per year	---
"	1995 33	"	"	---	---	1	m	3	4	4	4	4	1	1	8	10	48	00	"	384	00	c	m	---	same	"	40 00	"
Company acc't.	1996 28	"	"	---	---	6	m	3	2	2	4	2	2	2	12	10	38	00	"	456	00	c	m	---	---	"	40 00	"
Block holes	1997 31	"	"	---	---	6	m	3	2	4	4	4	1	1	11	10	50	00	"	562	50	c	m	---	---	"	40 00	"
Laborer	1998 23	Norway	Norway	---	---	1	m	---	---	---	---	---	---	---	12	12	33	00	"	396	00	c	m	125	---	farmer	40 00	"
"	1999 29	"	"	---	---	17	m	2	1	2	2	2	2	2	12	10	38	00	"	396	00	c	m	100	same	postman	14 00 per mo	---
"	2000 17	U. S.	U. S.	---	---	---	s	---	---	---	---	---	---	---	12	10	35	00	"	420	00	c	m	---	"	miner	15 00 per mo	---
"	2001 48	Ireland	Ireland	---	---	23	m	1	1	84	1	84	14	14	12	10	35	00	"	420	00	c	m	---	not answe'd	---	15 00	"
"	2002 65	England	England	---	---	36	m	6	1	---	1	---	---	---	12	10	33	00	"	396	00	c	m	---	same	---	15 00	"
"	2003 20	Canada	Canada	---	---	19	s	---	---	---	---	---	---	---	12	10	39	00	"	468	00	c	m	---	---	---	---	---
"	2004 14	U. S.	U. S.	---	---	---	s	---	---	---	---	---	---	---	2	10	15	00	"	30	00	c	m	---	"	---	---	---
"	2005 25	"	"	---	---	---	s	---	---	---	---	---	---	---	12	10	36	00	"	432	00	c	m	125	"	---	---	---
Drill boy	2006 15	England	England	---	---	10	s	---	---	---	---	---	---	---	12	10	25	00	"	300	00	c	m	---	"	---	---	---
"	2007 17	U. S.	U. S.	---	---	---	s	---	---	---	---	---	---	---	12	10	25	00	"	300	00	c	m	---	"	---	---	---
"	2008 13	"	"	---	---	---	s	---	---	---	---	---	---	---	12	10	25	00	"	300	00	c	m	---	"	---	---	---
"	2009 16	"	"	---	---	---	s	---	---	---	---	---	---	---	12	10	25	00	"	300	00	c	m	---	"	---	---	---
"	2010 14	Poland	Poland	---	---	---	s	---	---	---	---	---	---	---	12	10	25	00	"	150	00	c	m	---	"	---	---	---
"	2011 14	"	"	---	---	8	s	---	---	---	---	---	---	---	12	10	25	00	"	300	00	c	m	---	"	---	---	---
"	2012 13	"	"	---	---	12	s	---	---	---	---	---	---	---	1	10	25	00	"	25	00	c	m	---	"	---	---	---
Miner	2013 33	England	England	---	---	16	m	3	1	25	4	25	1	1	12	12	50	00	"	600	00	c	m	150	same	miner	15 00 per mo	---
"	2014 19	"	"	---	---	10	s	---	---	---	---	---	---	---	12	10	47	00	"	564	00	c	m	---	not answe'd	---	15 00	"
"	2015 24	"	"	---	---	7	s	---	---	---	---	---	---	---	6	10	47	00	"	282	00	c	m	100	same	miner	15 00	"
"	2016 40	U. S.	U. S.	---	---	---	s	---	---	---	---	---	---	---	12	10	47	00	"	564	00	c	m	225	"	---	---	---
"	2017 19	"	"	---	---	---	s	---	---	---	---	---	---	---	12	10	40	00	"	480	00	c	m	---	"	---	---	---
"	2018 23	"	"	---	---	---	s	---	---	---	---	---	---	---	12	10	47	00	"	564	00	c	m	125	"	---	---	---
"	2019 22	"	"	---	---	---	s	---	---	---	---	---	---	---	12	10	47	00	"	564	00	c	m	---	"	---	---	---
"	2020 19	"	"	---	---	---	s	---	---	---	---	---	---	---	12	10	47	00	"	564	00	c	m	---	"	---	---	---
"	2021 21	"	"	---	---	---	s	---	---	---	---	---	---	---	12	10	47	00	"	564	00	c	m	---	"	---	---	---
"	2022 34	Ireland	Ireland	---	---	14	m	7	3	13	7	13	18	18	12	10	47	00	"	564	00	c	m	75	"	farmer	7 50 per mo	---
"	2023 29	Poland	Poland	---	---	7	m	1	2	7	2	7	7	7	12	10	47	00	"	564	00	c	m	250	"	---	26 00 per year	---
"	2024 46	"	"	---	---	---	m	6	2	15	5	15	10	10	12	10	47	00	"	564	00	c	m	250	"	laborer	26 00	"
"	2025 40	"	"	---	---	12	m	5	5	7	5	7	7	7	12	10	47	00	"	564	00	c	m	150	"	farmer	26 00	"
Machinist	2026 19	U. S.	U. S.	---	---	---	s	---	---	---	---	---	---	---	10	10	35	00	"	420	00	c	m	---	"	machinist	35 00 per mo	---
"	2027 26	England	England	---	---	1	s	---	---	---	---	---	---	---	10	10	10	00	"	1,000	00	c	m	---	same	---	---	---
"	2028 21	U. S.	U. S.	---	---	---	s	---	---	---	---	---	---	---	12	10	55	00	"	660	00	c	m	---	---	---	---	---

* His father takes his wages.

† Refused.

TABLE NO. 7.—Continued.

Occupation.	Line number.	How many hours for a day's work in the old country.	Amount of money at interest or in the bank.	If foreign born, how much money did you have on arrival in U. S.	Do you own your home. If so, its value.	If mortgaged, amount of mortgage.	Rate of interest.	Are you as well off as five years ago.	Loss of time.				If renting home, monthly rental.	If boarding, cost per week, including room.	Life insurance, how much.	Do you belong to a benevolent society.	Weekly benefit in case of sickness or accident.	Have you a sewing machine.	Have you a piano.	Have you an organ.	Do you take a newspaper.			Age began work.	State of health then.	State of health now.	Amount of relief rendered friends in the old country.	Amount of money furnished to friends for passage to U. S.
									From sickness — (Days)	Inability to obtain work. — (Days.)	Causes not stated. — (Days.)	Daily.									Weekly.	Monthly.						
Drill boy	1951	.....	.....	.....	no	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	yes	\$6 00	no	no	no	no	no	13	good	good	.....	.....
	1952	.....	.....	.....	"	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	"	6 00	"	"	"	"	"	13	"	"	.....	.....
	1953	.....	.....	.....	"	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	"	6 00	yes	"	"	"	"	13	"	"	.....	.....
	1954	.....	.....	.....	"	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	"	6 00	no	"	"	"	"	12	"	"	.....	.....
	1955	.....	.....	.....	"	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	"	6 00	"	"	"	"	"	11	"	"	.....	.....
Miner	1956	.....	.....	.....	"	.....	.....	yes	.....	.....	.....	.....	.....	.....	.....	"	6 00	yes	"	yes	no	"	14	"	"	.....	.....
	1957	.....	.....	.....	"	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	"	6 00	no	"	"	"	"	14	"	"	.....	.....
	1958	.....	.....	.....	"	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	"	6 00	"	"	"	"	"	15	"	"	.....	.....
	1959	.....	.....	.....	"	.....	.....	yes	.....	.....	.....	.....	.....	.....	.....	"	6 00	"	"	"	"	"	14	"	"	.....	.....
	1960	.....	.....	.....	"	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	"	6 00	yes	"	"	"	"	10	"	"	.....	.....
	1961	.....	.....	+	"	.....	.....	"	13	.....	.....	.....	.....	.....	.....	"	6 00	"	"	"	"	"	16	"	"	.....	\$200
	1962	.....	.....	.....	"	.....	.....	"	.....	.....	.....	.....	.....	.....	.....	"	6 00	"	"	"	"	"	12	"	"	.....	.....
	1963	.....	.....	.....	"	.....	.....	no	.....	.....	.....	.....	.....	.....	.....	"	6 00	yes	"	"	yes	"	13	"	"	.....	.....
	1964	.....	.....	.....	"	.....	.....	yes	156	.....	.....	.....	.....	.....	.....	"	6 00	"	"	"	"	"	13	"	"	.....	.....
	1965	.....	.....	.....	"	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	"	6 00	"	"	"	"	"	15	"	"	.....	.....
	1966	.....	.....	.....	"	.....	.....	"	.....	.....	.....	.....	.....	.....	.....	"	6 00	"	"	"	"	"	11	"	"	.....	.....
	1967	.....	.....	.....	"	.....	.....	"	.....	.....	.....	.....	.....	.....	.....	"	6 00	"	"	no	"	"	11	"	"	.....	.....
	1968	.....	.....	.....	"	.....	.....	"	.....	.....	.....	.....	.....	.....	.....	"	6 00	"	"	"	"	"	10	"	"	.....	.....
	1969	.....	.....	.....	"	.....	.....	"	.....	.....	.....	.....	.....	.....	.....	"	6 00	"	"	"	"	"	12	"	"	.....	.....
	1970	.....	.....	.....	"	.....	.....	"	117	.....	.....	.....	.....	.....	.....	"	6 00	no	"	"	yes	"	10	"	"	.....	.....
Laborer	1971	.....	.....	.....	"	.....	.....	"	.....	.....	.....	.....	.....	.....	.....	"	6 00	yes	"	"	"	"	14	"	"	.....	.....
	1972	.....	.....	.....	"	.....	.....	yes	.....	.....	.....	.....	.....	.....	.....	"	6 00	"	"	"	no	"	14	"	"	.....	.....
	1973	.....	.....	.....	"	.....	.....	"	.....	.....	.....	.....	.....	.....	.....	"	6 00	"	"	"	yes	"	17	"	"	.....	.....
	1974	.....	.....	.....	"	.....	.....	"	.....	.....	.....	.....	.....	.....	.....	"	6 00	"	"	"	"	"	12	"	"	.....	.....
	1975	.....	.....	.....	"	.....	.....	"	.....	.....	.....	.....	.....	.....	.....	"	6 00	no	"	"	"	"	16	"	"	.....	.....
	1976	.....	.....	.....	"	.....	.....	"	.....	.....	.....	.....	.....	.....	.....	"	6 00	"	"	"	"	"	16	"	"	.....	.....
	1977	.....	.....	.....	"	.....	.....	"	.....	.....	.....	.....	.....	.....	.....	"	6 00	"	"	"	"	"	18	"	"	.....	.....
	1978	.....	.....	.....	"	.....	.....	"	.....	.....	.....	.....	.....	.....	.....	"	6 00	"	"	"	"	"	12	"	"	.....	.....
	1979	"	"	"	4 00	"	"	"	"	"	13	"	"	
	1980	"	"	"	4 50	"	"	"	"	"	17	"	"	
Trammer	1981	"	"	"	6 00	"	"	"	yes	"	11	"	"	
	1982	"	"	"	6 00	"	"	"	no	"	16	"	"	
	1983	"	yes	"	6 00	yes	"	"	"	"	19	"	"	

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TABLE NO. 7.—Continued.

Occupation.	Line number.	Age.	Nativity.	Nativity of parents.	How long in U. S., if foreign born.—(Years.)	Married or single.	How many children in family.	How many attend school.	How many depend on you for support.	How many years at present occupation.	How long with present employer.—(Years.)	Number of months employed during year.	How many hours for a day's work.	Wages paid.	Annual earnings.	Are you paid cash or trade.	How often are you paid.	Amount saved during the year.	How do wages compare with former years in this country.	What occupation did you follow in the old country.	Wages received in the old country.
England															\$540 00	0	m	\$300	not ans'd	laborer	\$25 00 per year
U. S.															720 00	0	m	200	same	farmer	25 00 "
Poland															574 00	0	m	200	same		25 00 "
"															504 00	0	m	120	higher	blacksmith	20 00 per mo
England															480 00	0	m	250	same	carpenter	15 00 "
"															600 00	0	m	200	"		20 00 per mo
"															720 00	0	m	400	"		15 00 "
"															624 00	0	m	200	"		
Germany															540 00	0	m	225	higher	farmer	40 00 per year
Canada															900 00	0	m	200	same	farmer	40 00 per year
Sweden															456 00	0	m	200	higher		
Norway															120 00	0	m	300	"		
England															720 00	0	m	200	same	engineer	20 00 per mo
"															584 00	0	m	225	"	miner	15 00 "
"															564 00	0	m	200	"	butcher	8 00 "
Poland															576 00	0	m	155	"	laborer	10 00 "
"															324 00	0	m	200	better	"	20 00 "
Canada															800 00	0	m	120	not ans'd	locksmith	17 00 "
Austria															490 00	0	m	120	"	farmer	board
"															456 00	0	m	70	not ans'd	not ans'd	not ans'd
"															466 90	0	m	80	"	laborer	8 00 per mo
Finland															480 00	0	m	100	better	"	8 00 "
"															490 00	0	m	100	not ans'd	fisher	not ans'd
"															460 00	0	m	100	"		
Norway															480 00	0	m	180	same	laborer	10 00 per mo
Finland															480 00	0	m	180	"	"	8 00 "
"															285 00	0	m	100	"	fisher	2 00 "
Austria															480 00	0	m	100	"	farmer	2 00 "
"															420 00	0	m	60	"	"	2 00 "
"															420 00	0	m	60	same	"	2 00 "

"	1	8	---	---	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
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LABOR AND INDUSTRIAL STATISTICS.

TABLE NO. 7.—Continued.

Occupation.	Line Number.	How many hours for a day's work in the old country.	Amount of money at interest or in the bank.	If foreign born, how much money did you have on arrival in U. S.	Do you own your home. If so, its value.	If mortgaged, amount of mortgage.	Rate of interest.	Are you as well off as five years ago.	Loss of time.				If renting home, monthly rental.	If boarding, cost per week, including room.	Life insurance, how much.	Do you belong to a benefit society.	Weekly benefit in case of sickness or accident.	Have you a sewing machine.	Have you a piano.	Have you an organ.	Do you take a newspaper.			Age began work.	State of health then.	State of health now.	Amount of relief rendered friends in the old country.	Amount of money furnished to friends for passage to U. S.
									From sickness.—(Days.)	Inability to obtain work.—(Days.)	Causes not stated.—(Days.)	Daily.									Weekly.	Monthly.						
Machinist.....	2029	12	+		no			yes				\$4 50				yes	\$6 00	no	no	no	no	17	good	good	\$150			
Tramrer.....	2030	12		\$16	"			"				4 50				"	6 00	"	"	"	"	11	"	"				
".....	2031	12			"			"				\$2 00				"	6 00	"	"	"	"	14	"	"				
".....	2032	12	+	18	"			"					4 00			"	6 00	"	"	"	"	11	"	"				
".....	2033	12			"			"								"	6 00	"	"	"	"	15	"	"				
Blacksmith.....	2034				"			yes								"	6 00	"	"	"	"	15	"	"				
".....	2035				"			"								"	6 00	yes	"	yes	"	15	"	"				
".....	2036	8	+	30	"			"						\$1,500	"	6 00	"	"	"	"	"	15	"	"				
Carpenter.....	2037	8	+	15	"			"								"	6 00	no	"	no	"	12	"	"				
".....	2038				"			"								"	6 00	"	"	yes	"	12	"	"				
Fireman.....	2039	12	+	10	"			yes					4 50			"	6 00	"	"	"	"	12	"	"				
".....	2040	12	+		"			"								"	6 00	"	"	"	"	16	"	"				
Mine laborer.....	2041	12	+		"			"								"	6 00	"	"	"	"	16	"	"				
Office boy.....	2042		+		"			"					4 50			"	6 00	"	"	"	"	10	"	"		200		
Shift boss.....	2043				"			"								"	6 00	"	"	"	"	11	"	"				
Engineer.....	2044	8	+	40	"			yes					4 50			"	6 00	yes	"	yes	"	13	"	"		500		
Timberman.....	2045	8	+	+	"			"								"	6 00	no	"	no	"	11	"	"				
Train boss.....	2046	12	+	16	"			"								"	6 00	"	"	"	"	11	"	"				
Lender.....	2047	12			"			"								"	6 00	"	"	"	"	16	"	"				
Boss in stamp mill.	2048	10		75	"			"								"	6 00	yes	"	"	"	16	"	"				
Tramrer.....	2049	10		30	"			"					4 00			"	12 00	no	"	"	"	16	"	"		\$150		
".....	2050				"			"					4 00			"	6 00	"	"	"	"	17	"	"				
".....	2051				"			yes					4 00			"	6 00	yes	"	"	"	17	"	"				
".....	2052	10			"			"								"	6 00	"	"	"	"	15	"	"				
".....	2053	10			"			"					4 00			"	6 00	no	"	"	"	16	"	"				
".....	2054	10			"			"								"	6 00	"	"	"	"	16	"	"		25		
".....	2055			7	"			"					4 00			"	6 00	"	"	"	"	16	"	"				
Laborer.....	2056				"			"								"	6 00	"	"	"	"	16	"	"				
".....	2057	10			"			"					4 00			"	6 00	"	"	"	"	16	"	"				
".....	2058	10			"			"					4 00			"	6 00	"	"	"	"	14	"	"		50		
".....	2059				"			"					4 00			"	6 00	"	"	"	"	16	"	"				
".....	2060				"			"					4 00			"	6 00	"	"	"	"	16	"	"				
".....	2061				"			yes					4 00			"	6 00	yes	"	"	"	15	"	"				

[illegible]

Refused.

TABLE NO. 7.—Continued.

Occupation.	Line number.	Age.	Nativity.	Nativity of parents.	How long in U. S. if foreign born.—(Years.)	Married or single.	How many children in family.	How many attended school.	How many depend on you for support.	How many years at present occupation.	How long with present employer.—(Years.)	Number of months employed during year.	How many hours for a day's work.	Wages paid.	Annual earnings.	Are you paid cash or trade.	How often are you paid.	Amount saved during the year.	How do wages compare with former years in this country.	What occupation did you follow in the old country.	Wages received in the old country.
Engineer.....	2107 24	England	England	England	22	m	1	1	2	8	3 yrs	12	10	\$65 00 pr m	\$780 00	c	m	\$300	same	laborer	board
"	2108 17	U. S.	"	"	5	s	1	1	1	3	3	12	10	80 00 "	800 00	c	m	350	not ans'w'd	"	"
Laborer.....	2109 22	U. S.	"	"	1	s	1	1	1	3	3	12	10	65 00 "	780 00	c	m	350	better	"	"
"	2110 26	Finland	Ireland	Ireland	1	s	4	1	5	8	3	12	10	40 00 "	480 00	c	m	350	same	laborer	board
"	2111 21	Finland	Finland	Finland	1	s	1	1	1	1	1	12	10	38 00 "	456 00	c	m	350	same	"	"
"	2112 30	Norway	Norway	Norway	18	m	3	2	4	8	2	12	10	45 00 "	540 00	c	m	100	better	miner	12 00 per mo
"	2113 30	Canada	France	France	8	m	3	2	4	14	3	12	10	40 00 "	480 00	c	m	100	same	not ans'w'd	not ans'w'd
"	2114 36	England	England	England	21	m	4	1	5	22	1	11	10	40 00 "	440 00	c	m	350	better	laborer	15 00 per mo
Mining captain.	2115 44	England	England	England	22	m	7	5	8	6	6	12	10	100 00 "	1,200 00	c	m	240	better	miner	15 00 "
"	2116 43	Finland	Finland	Finland	16	m	4	5	4	1	1	12	10	80 00 "	960 00	c	m	240	same	"	17 00 "
Miner.....	2117 41	Finland	Finland	Finland	12	m	2	1	3	12	3	12	10	50 00 "	600 00	c	m	140	same	farmer	10 00 "
"	2118 22	"	"	"	5	s	1	1	2	5	2	12	10	45 00 "	540 00	c	m	140	better	miner	12 00 "
"	2119 33	"	"	"	4	s	1	1	2	16	1	12	10	45 00 "	540 00	c	m	140	same	laborer	8 00 "
"	2120 26	"	"	"	7	s	1	1	2	2	6	12	10	45 00 "	540 00	c	m	140	same	miner	16 00 "
"	2121 46	"	"	"	1	m	2	2	3	30	1	9	10	45 00 "	405 00	c	m	140	same	"	"
"	2122 27	"	"	"	21	m	2	1	3	11	2	12	10	45 00 "	540 00	c	m	200	same	"	16 00 "
"	2123 30	"	"	"	6	m	1	1	2	6	2	12	10	45 00 "	540 00	c	m	240	better	"	12 00 "
"	2124 41	"	"	"	17	m	5	3	6	17	1	12	10	50 00 "	600 00	c	m	200	better	"	10 00 "
"	2125 25	"	"	"	6	m	3	1	1	6	1	12	10	50 00 "	600 00	c	m	150	same	laborer	8 00 "
"	2126 32	Germany	Germany	Germany	16	m	3	1	4	16	3	12	10	50 00 "	600 00	c	m	150	same	miner	10 00 per mo
"	2127 42	"	"	"	16	m	3	1	4	16	3	12	10	50 00 "	600 00	c	m	150	same	"	"
"	2128 42	Sweden	Sweden	Sweden	16	m	4	3	6	27	2	12	10	45 00 "	540 00	c	m	150	better	"	12 00 "
"	2129 31	Norway	Norway	Norway	6	m	1	1	2	6	1	12	10	50 00 "	600 00	c	m	150	same	"	11 00 "
"	2130 34	"	"	"	8	m	1	1	2	8	3	12	10	50 00 "	600 00	c	m	150	same	"	11 00 "
"	2131 25	"	"	"	8	m	2	1	2	8	3	12	10	45 00 "	540 00	c	m	150	same	laborer	8 00 "
"	2132 33	"	"	"	10	m	1	1	2	8	1	12	10	45 00 "	540 00	c	m	150	same	miner	12 00 "
"	2133 32	"	"	"	6	m	3	1	4	16	1	12	10	45 00 "	540 00	c	m	150	same	"	12 00 "
"	2134 28	"	"	"	7	m	1	1	2	7	2	12	10	45 00 "	540 00	c	m	180	same	fisher	don't know
"	2135 68	Ireland	Ireland	Ireland	28	m	1	1	2	50	3	12	10	50 00 "	600 00	c	m	180	same	miner	14 00 per mo
"	2136 31	"	"	"	7	m	2	1	3	15	1	12	10	48 00 "	576 00	c	m	160	not so good	"	12 50 "
"	2137 80	U. S.	U. S.	U. S.	11	m	3	1	4	14	1	12	10	50 00 "	600 00	c	m	200	better	"	"
"	2138 32	"	"	"	11	m	2	1	3	16	2	12	10	50 00 "	600 00	c	m	200	same	"	"
"	2139 39	"	"	"	11	m	2	1	3	9	1	11	10	50 00 "	562 50	c	m	200	same	"	"

"	2140 72	England	"	18	m	4	7	8	5	18	2	"	12	10	55 00	"	660 00	c	m	150	"	laborer	8 00 per mo
"	2141 38	"	"	16	m	7	5	8	8	26	2	"	12	10	50 00	"	600 00	c	m	150	"	miner	15 00 "
"	2142 31	"	"	6	m	2	5	3	3	20	3	"	9	10	50 00	"	450 00	c	m	200	not so good	"	15 00 "
"	2143 41	"	"	15	m	8	2	4	4	30	8	"	12	10	50 00	"	600 00	c	m	300	same	"	17 00 "
"	2144 59	"	"	21	m	2	2	1	1	44	2	"	12	10	50 00	"	600 00	c	m	300	same	"	15 00 "
"	2145 50	"	"	27	m	2	2	1	1	40	3	"	12	10	50 00	"	600 00	c	m	600	"	"	15 00 "
"	2146 40	"	"	14	m	7	3	8	8	30	4	"	12	10	50 00	"	600 00	c	m	200	"	"	15 00 "
"	2147 43	"	"	14	m	1	1	1	2	31	1	"	12	10	50 00	"	600 00	c	m	200	not so good	"	17 00 "
Surface manager	2148 52	"	"	26	m	4	1	3	3	8	8	"	12	10	250 00	"	3,000 00	c	m	+	better	cabinetmaker	30 00 "
" boss	2149 43	Canada	Canada	19	m	7	4	8	8	8	1	"	12	10	60 00	"	720 00	c	m	100	higher	laborer	26 00 "
Lander	2150 26	Austria	Austria	2	m	2	2	8	8	2	2	"	12	10	40 00	"	480 00	c	m	100	same	farmer	10 00 "
Mine laborer	2151 26	"	"	1	s	1	1	1	1	1	1	"	12	10	38 00	"	456 00	c	m	25	not ans'd	"	40 00 per year
Carpenter	2152 35	Sweden	Sweden	8	s	4	4	5	5	10	1	mo	12	10	45 00	"	540 00	c	m	300	better	carpenter	10 40 per mo
Timberman	2153 32	U. S.	"	---	s	---	---	---	---	3	2	8 yrs	12	10	60 00	"	720 00	c	m	---	---	---	---
Drill boy	2154 20	"	France	---	s	---	---	---	---	1	2	"	12	10	35 00	"	420 00	c	m	---	---	---	---
Fireman	2155 28	"	Scotland	---	m	1	1	2	2	2	2	"	12	10	45 00	"	540 00	c	m	100	same	---	---
"	2156 18	"	England	---	s	---	---	---	---	1	1	w	1	10	40 00	"	10 00	c	m	---	---	---	---
Engineer	2157 32	"	"	---	s	---	---	---	---	12	8	yrs	12	10	65 00	"	780 00	c	m	300	"	---	---
"	2158 48	England	"	30	m	3	2	3	3	30	8	"	12	10	65 00	"	780 00	c	m	200	"	engineer	20 00 per mo
Machinist	2159 28	U. S.	"	---	m	---	---	---	---	1	4	"	12	10	60 00	"	720 00	c	m	---	---	---	---
"	2160 21	"	"	---	s	---	---	---	---	1	1	"	12	10	40 00	"	480 00	c	m	---	---	---	---
"	2161 37	Scotland	Scotland	17	m	1	1	2	2	11	1	"	12	10	80 00	"	960 00	c	m	400	"	machinist	15 00 per mo
Trawler	2162 31	Finland	Finland	1	s	---	---	---	---	1	1	"	12	8	52 00	"	624 00	c	m	250	"	farmer	50 00 per year
"	2163 23	"	"	1	s	---	---	---	---	1	1	"	12	8	52 00	"	624 00	c	m	200	"	"	50 00 "
"	2164 40	Austria	Austria	5	m	---	---	---	---	5	5	mo	5	10	52 00	"	200 00	c	m	---	---	---	40 00 "
"	2165 18	"	"	4	m	---	---	---	---	4	4	"	4	8	52 00	"	208 00	c	m	---	---	---	20 00 "
"	2166 21	"	"	8	s	---	---	---	---	3	8	yrs	12	10	50 00	"	600 00	c	m	120	same	"	w'd for board
"	2167 21	"	"	2	s	---	---	---	---	2	1	"	12	10	53 00	"	636 00	c	m	---	"	"	18 00 per mo
Laborer	2168 22	"	"	1	s	---	---	---	---	1	1	"	12	10	35 00	"	420 00	c	m	---	"	"	not answered
"	2169 30	"	"	1	s	---	---	---	---	1	1	"	12	10	35 00	"	420 00	c	m	25	"	"	40 00 per year
"	2170 35	"	"	1	m	2	2	3	3	1	1	"	12	10	39 00	"	468 00	c	m	---	"	"	40 00 "
"	2171 20	"	"	3	m	---	---	---	---	2	2	mo	12	10	34 00	"	68 00	c	m	---	---	"	40 00 "
"	2172 23	"	"	1	s	---	---	---	---	1	1	yr	12	10	37 00	"	444 00	c	m	65	---	"	board & clothes
"	2173 22	France	France	1	m	6	2	7	7	1	1	"	12	10	40 00	"	480 00	c	m	---	---	"	12 00 per mo
"	2174 32	"	"	1	m	2	2	8	8	1	1	"	12	10	40 00	"	480 00	c	m	---	---	smelter	16 00 "
"	2175 47	Canada	Canada	13	m	---	---	---	---	35	1	"	12	10	36 00	"	432 00	c	m	120	same	laborer	26 00 "
Miner	2176 37	Poland	Poland	16	m	3	1	4	4	16	1	"	12	10	52 00	"	624 00	c	m	200	"	farmer	40 00 per year
"	2177 23	Finland	Finland	6	m	2	2	3	3	3	3	"	12	10	50 00	"	600 00	c	m	---	better	"	board
"	2178 22	Wales	England	1	s	---	---	---	---	1	1	"	12	10	40 00	"	480 00	c	m	---	---	miner	18 00 per mo
"	2179 41	England	"	11	m	2	1	3	3	30	1	"	12	10	52 00	"	624 00	c	m	225	same	"	15 00 "
"	2180 41	"	"	20	m	---	---	---	---	20	1	"	12	10	52 00	"	624 00	c	m	200	"	"	15 00 "
"	2181 29	"	"	15	m	2	1	8	8	15	1	"	12	12	52 00	"	624 00	c	m	200	"	"	20 00 "
"	2182 30	"	"	13	m	8	1	4	4	10	1	"	12	10	52 00	"	624 00	c	m	200	"	"	10 00 "
"	2183 30	"	"	2	s	---	---	---	---	5	2	mo	12	10	52 00	"	624 00	c	m	350	not ans'd	"	15 00 "
"	2184 33	"	"	14	m	3	2	3	3	17	1	yr	12	10	52 00	"	624 00	c	m	200	same	"	15 00 "

† Refused.

TABLE No. 7.—Continued.

Occupation.	Line number.	How many hours for a day's work in the old country.	Amount of money at in- terest or in the bank.	If foreign born, how much money did you have on arrival in U. S.	Do you own your home, if so, its value.	If mortgaged, amount of mortgage	Rate of interest.	Are you as well off as five years ago.	Loss of time.				If renting home, monthly rental.	If boarding, cost per week, including room.	Life insurance, how much.	Do you belong to a bene- volent society.	Weekly benefit in case of sickness or accident.	Have you a sewing ma- chine.	Have you a piano.	Have you an organ.	Do you take a newspaper.			Age began work.	State of health then.	State of health now.	Amount of relief rendered friends in the old country.	Amount of money fur- nished to friends for pas- sage to U. S.
									From sickness.— (Days.)	Inability to obtain work.—(Days.)	Causes not stated. (Days.)	Daily.									Weekly.	Monthly.						
Engineer	2107		+		no			yes			\$5 00		\$1,000	yes	\$6 00	yes	no	yes	no	yes	no	14	good	good				
"	2108				"			"			5 00		1,000	"	6 00	no	"	"	"	"	"	"	14	"	"			
Laborer	2109				"			"						"	6 00	"	"	"	"	"	"	"	16	"	"			
"	2110				"			yes			5 00			"	10 00	yes	"	"	no	"	"	"	16	"	"			
"	2111				"								4 00	"	6 00	no	"	"	"	"	"	17	"	"				
"	2112	10			"			"			3 00		1,000	"	6 00	yes	"	"	yes	"	"	"	14	"	"			
"	2113			\$28	"			"			3 00			"	6 00	"	"	"	"	"	"	"	16	"	"			
"	2114	10		17	"			"		26	3 00			"	12 00	"	"	"	no	"	"	"	14	"	"			
Mining captain	2115	8	+	20	"			"			10 00		3,000	"	6 00	"	"	"	yes	"	yes	"	16	"	"			
"	2116			85	"			"			10 00		2,000	"	6 00	"	"	"	"	yes	yes	"	13	"	"	\$1,200	\$250	
Miner	2117			9	700			"					1,000	"	6 00	"	"	"	no	"	no	"	17	"	"	1,000	250	
"	2118			3	no			"					4 00	"	6 00	no	"	"	"	"	"	"	17	"	"			
"	2119	10		17	"			"			3 00			"	6 00	yes	"	"	yes	"	"	yes	17	"	"	1,460		
"	2120	10			"			"			6 00			"	6 00	no	"	"	"	"	"	no	14	"	"			
"	2121	10	+	300	700			"	78						2 00	yes	"	"	yes	"	"	"	16	"	"			
"	2122	10		2	no			"			3 00		1,000	"	6 00	"	"	"	"	"	"	"	16	"	"			
"	2123	10						"			3 00		1,000	"	6 00	no	"	"	yes	"	"	"	19	"	"			
"	2124	10	+		700			"						"	12 00	yes	"	"	no	"	"	"	17	"	"	300	125	
"	2125				no			"			5 00			"	6 00	"	"	"	yes	"	"	"	16	"	"	480	125	
"	2126				700			"			5 00			"	6 00	"	"	"	yes	"	"	"	16	"	"			
"	2127	10						"						"	6 00	no	"	"	no	"	"	"	15	"	"		100	
"	2128	10	+	3	no			"			3 00			"	6 00	"	"	"	yes	"	"	"	15	"	"	480		
"	2129	10		12	400			"						"	6 00	yes	"	"	"	"	"	"	17	"	"			
"	2130	10	+	31	no			"			5 00			"	6 00	"	"	"	no	"	"	"	16	"	"			
"	2131	10	+		"			"			5 00			"	6 00	"	"	"	"	"	"	"	14	"	"			
"	2132	10	+		"			"			8 00			"	6 00	"	"	"	yes	"	"	"	16	"	"			
"	2133	10			600			"						"	6 00	"	"	"	"	yes	"	"	16	"	"			
"	2134				no			"			3 00			"	6 00	"	"	"	no	"	"	"	16	"	"	180		
"	2135	10			"			"			3 00			"	6 00	"	"	"	"	"	"	"	15	"	"			
"	2136	10	+		"			"			3 00			"	6 00	"	"	"	yes	"	"	"	16	"	"			
"	2137				300			"			3 00			"	6 00	"	"	"	"	"	"	"	16	"	"			
"	2138		\$400		no			"						"	6 00	"	"	"	"	"	"	"	16	"	"			
"	2139							"			5 00					"	"	"	"	"	"	"	16	"	"			

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Occupation	Age	Sex	Marital Status	Years in Occupation	Years in Present Occupation	Wage per Week	Hours per Week	Education	Experience	Health	Character	Notes
"	2140	"	"	10	8	423	20	"	"	"	"	"
"	2141	"	"	8	8	"	35	"	"	"	"	"
"	2142	"	"	8	8	"	11	"	"	"	"	"
"	2143	"	"	8	8	"	125	"	"	"	"	"
"	2144	"	"	8	8	†	"	"	"	"	"	"
"	2145	"	"	8	8	†	150	"	"	"	"	"
"	2146	"	"	8	8	"	20	"	"	"	"	"
"	2147	"	"	8	8	600	24	"	"	"	"	"
Surface manager	2148	"	"	10	10	†	200	"	"	"	"	"
" boss	2149	"	"	10	10	†	†	"	"	"	"	"
Lander	2150	"	"	"	"	"	9	"	"	"	"	"
Mine laborer	2151	"	"	12	12	"	13	"	"	"	"	"
Carpenter	2152	"	"	12	12	†	15	"	"	"	"	"
Tinberman	2153	"	"	"	"	"	"	"	"	"	"	"
Drill boy	2154	"	"	"	"	"	"	"	"	"	"	"
Fireman	2155	"	"	"	"	"	"	"	"	"	"	"
"	2156	"	"	"	"	"	"	"	"	"	"	"
Engineer	2157	"	"	"	"	1,000	"	"	"	"	"	"
"	2158	"	"	10	10	2,000	85	1,800	"	"	"	"
Machinist	2159	"	"	"	"	"	"	no	"	"	"	"
"	2160	"	"	"	"	"	"	"	"	"	"	"
"	2161	"	"	10	10	†	"	"	"	"	"	"
Trammer	2162	"	"	12	12	250	"	"	"	"	"	"
"	2163	"	"	12	12	200	12	"	"	"	"	"
"	2164	"	"	12	12	"	"	"	"	"	"	"
"	2165	"	"	"	"	"	"	"	"	"	"	"
"	2166	"	"	"	"	"	"	"	"	"	"	"
"	2167	"	"	"	"	†	9	"	"	"	"	"
Laborer	2168	"	"	12	12	†	"	"	"	"	"	"
"	2169	"	"	12	12	"	10	"	"	"	"	"
"	2170	"	"	12	12	"	11	"	"	"	"	"
"	2171	"	"	12	12	"	"	"	"	"	"	"
"	2172	"	"	"	"	"	6	"	"	"	"	"
"	2173	"	"	10	10	"	18	"	"	"	"	"
"	2174	"	"	10	10	"	20	"	"	"	"	"
"	2175	"	"	10	10	†	"	"	"	"	"	"
Miner	2176	"	"	12	12	†	"	"	"	"	"	"
"	2177	"	"	"	"	"	"	"	"	"	"	"
"	2178	"	"	10	10	†	"	"	"	"	"	"
"	2179	"	"	8	8	†	†	"	"	"	"	"
"	2180	"	"	8	8	†	21	"	"	"	"	"
"	2181	"	"	8	8	†	20	"	"	"	"	"
"	2182	"	"	8	8	†	20	"	"	"	"	"
"	2183	"	"	8	8	†	20	"	"	"	"	"
"	2184	"	"	8	8	†	"	"	"	"	"	"

+ Refused.

LABOR AND INDUSTRIAL STATISTICS.

TABLE No. 7.—Continued.

Occupation.	Line number.	Age.	Nativity.	Nativity of parents.	How long in U. S., if foreign born.—(Years.)	Married or single.	How many children in family.	How many attend school.	How many depend on you for support.	How many years at present occupation.	How long with present employer.—(Years.)	Number of months employed during year.	How many hours for a day's work.	Wages paid.	Annual earnings.	Are you paid cash or trade.	How often are you paid.	Amount saved during the year.	How do wages compare with former years in this country.	What occupation did you follow in the old country.	Wages received in the old country.
Miner	2185	25	England	England	8	m	2	..	3	13	2 mo	12	10	\$52 00	\$324 00	c	m	\$250	same	miner	\$20 00 per mo
"	2186	25	"	"	7	s	..	..	..	12	1	12	10	53 00	624 00	c	m	..	"	"	15 00 "
"	2187	34	"	"	14	m	4	2	5	20	4	12	10	65 00	780 00	c	m	..	"	"	15 00 "
"	2188	35	"	"	9	m	4	2	5	20	3	12	10	52 00	624 00	c	m	200	"	"	15 00 "
"	2189	24	"	"	9	s	..	..	..	6	3	12	10	52 00	624 00	c	m	200	"	"	15 00 "
"	2190	38	"	"	19	m	3	3	4	25	5	5	10	65 00	225 00	c	m	100	"	miner	15 00 per mo
"	2191	25	"	"	5	m	2	..	3	10	3	12	10	52 00	624 00	c	m	225	"	"	15 00 "
"	2192	20	"	"	4	s	..	..	..	4	3	12	10	52 00	624 00	c	m	200	higher	"	15 00 "
"	2193	31	"	"	10	m	2	..	3	20	2	12	10	52 00	624 00	c	m	225	"	miner	15 00 per mo
"	2194	30	"	"	1	s	..	..	..	15	1	12	10	52 00	324 00	c	m	..	"	"	20 00 "
"	2195	18	"	"	4	s	..	..	..	3	3	12	10	52 00	624 00	c	m	..	higher	laborer	7 50 "
"	2196	42	"	"	4	m	6	..	6	28	3	12	10	52 00	624 00	c	m	300	same	miner	15 00 "
"	2197	61	"	"	25	m	6	2	4	25	3 yrs	12	10	50 00	600 00	c	m	250	less	traveling agent	25 00 "
"	2198	50	"	"	40	m	6	2	7	34	1	12	10	55 00	660 00	c	m	..	same	"	..
"	2199	28	"	"	8	m	8	1	4	16	4	12	10	55 00	660 00	c	m	150	"	miner	15 00 per mo
"	2200	27	"	"	8	m	2	1	3	9	1	12	10	50 00	600 00	c	m	200	less	"	15 00 "
"	2201	44	"	"	17	m	4	4	5	30	2	12	10	50 00	600 00	c	m	150	not so good	"	15 00 "
"	2202	46	"	"	20	m	..	..	..	20	2	12	10	50 00	600 00	c	m	100	same	"	15 00 "
"	2203	24	"	"	6	s	..	..	..	6	6 mo	6	10	55 00	330 00	c	m	100	"	"	15 00 "
"	2204	27	"	"	22	s	..	..	..	6	1 yr	12	10	50 00	600 00	c	m	200	not answ'd	"	15 00 "
"	2205	24	"	"	2	m	..	..	..	10	2	12	10	50 00	600 00	c	m	300	same	"	15 00 "
"	2206	50	"	"	14	m	6	8	7	38	4	12	10	55 00	660 00	c	m	300	"	"	15 00 "
"	2207	70	Sweden	Sweden	1	m	4	..	2	1	1	12	10	45 00	540 00	c	m	..	"	"	8 00 "
"	2208	40	"	"	10	m	7	1	3	10	1	12	10	50 00	600 00	c	m	..	better	"	11 00 "
"	2209	34	"	"	8	m	2	1	3	8	2	12	10	50 00	600 00	c	m	..	"	farmer	don't know
"	2210	45	"	"	2	s	..	..	..	2	2	12	10	50 00	600 00	c	m	250	not answ'd	"	..
"	2211	38	Norway	Norway	3	m	1	..	2	3	3	12	10	50 00	600 00	c	m	200	same	miner	13 00 per mo
"	2212	22	"	"	8	m	3	..	4	8	2	12	10	50 00	600 00	c	m	150	better	"	11 00 per mo
"	2213	43	"	"	16	m	10	4	11	6	2	12	10	50 00	600 00	c	m	..	same	laborer	10 00 "
"	2214	36	Finland	Finland	9	m	2	1	3	3	2	12	10	50 00	600 00	c	m	125	better	farmer	10 00 "
"	2215	20	"	"	6	m	..	..	1	6	2	12	10	50 00	600 00	c	m	150	"	"	10 00 "
"	2216	42	"	"	7	m	4	8	5	7	3	12	10	50 00	600 00	c	m	200	same	molder	20 00 "
"	2217	23	"	"	6	m	..	..	2	6	2	12	10	45 00	540 00	c	m	100	"	sailor	25 00 per year

"	2218 25	Poland	Poland	4	m	2	4	1	8	2	1	"	12	10	45	00	"	540 00	c	m	not answ'd	"	25 00 per mo
"	2219 27	Ireland	Ireland	9	m	4	1	8	8	9	2	"	12	10	50	00	"	600 00	c	m	same	laborer	8 00
Engineer	2220 31	England	England	21	s	---	---	---	---	12	2	"	12	10	65	00	"	780 00	c	m	---	engineer	20 00
"	2221 31	"	"	1	s	---	---	---	---	12	1	"	12	10	50	00	"	600 00	c	m	---	miner	17 00
Rock boss	2222 62	"	"	85	m	---	---	---	---	12	1	"	12	10	65	00	"	780 00	c	m	same	miner	16 00
"	2223 35	"	"	22	m	4	2	5	5	5	5	"	12	10	100	00	"	1,200 00	c	m	better	stamp mill	5 00
Mine captain	2224 46	Canada	Canada	27	m	7	1	8	8	27	4	"	12	10	60	00	"	120 00	c	m	---	carpenter	17 00 per mo
"	2225 50	Finland	Finland	7	m	5	4	6	6	27	3	"	12	10	55	00	"	640 00	c	m	same	carpenter	17 00
"	2226 46	Sweden	Sweden	7	m	5	3	6	6	27	3	"	12	10	55	00	"	660 00	c	m	not so good	engineer	17 00
Machinist	2227 24	England	England	3	m	5	2	8	8	12	2	"	12	10	55	00	"	660 00	c	m	same	engineer	17 00
"	2228 34	"	"	15	m	4	2	5	5	12	2	"	12	10	70	00	"	840 00	c	m	---	blacksmith	20 00
Blacksmith	2229 30	U. S.	U. S.	---	m	2	1	8	8	12	3	"	10	10	60	00	"	600 00	c	m	---	laborer	10 00 per mo
"	2230 61	Finland	Finland	7	m	6	4	7	7	7	7	"	12	10	60	00	"	720 00	c	m	better	laborer	10 00
Trammer	2231 36	"	"	6	m	---	---	---	---	12	2	"	12	10	48	00	"	576 00	c	m	---	lapidist	12 00
"	2232 44	Switz'd	Switz'd	3	m	---	---	---	---	12	3	"	12	10	40	00	"	480 00	c	m	same	lapidist	12 00
Laborer	2233 46	Germany	Germany	15	m	4	---	---	---	12	1	"	12	10	40	00	"	480 00	c	m	not so good	laborer	10 00
"	2234 59	Canada	Canada	9	m	3	---	---	---	12	2	"	12	10	40	00	"	480 00	c	m	same	lumberman	25 00
"	2235 28	"	"	13	m	2	---	---	---	12	2	"	12	10	40	00	"	480 00	c	m	---	teamster	25 00 per mo
"	2236 47	"	"	11	m	12	3	5	5	11	2	"	12	10	40	00	"	480 00	c	m	---	chopping	30 00
"	2237 30	"	"	5	m	2	---	---	---	12	1	"	12	10	40	00	"	480 00	c	m	not so good	chopping	30 00
"	2238 20	England	England	8	s	---	---	---	---	12	3	"	12	10	35	00	"	420 00	c	m	not answ'd	not answ'd	not answ'd
"	2239 48	Ireland	Ireland	25	m	---	---	---	---	12	5	"	12	10	40	00	"	480 00	c	m	not so good	laborer	10 00 per mo
"	2240 45	Finland	Finland	4	m	5	2	6	6	1	1	"	12	10	38	00	"	456 00	c	m	not answ'd	farmer	10 00
"	2241 18	U. S.	U. S.	---	s	---	---	---	---	12	3	"	12	10	33	00	"	386 00	c	m	---	---	---
"	2242 15	"	"	---	s	---	---	---	---	12	1	"	12	10	26	00	"	312 00	c	m	---	---	---
"	2243 15	"	"	---	s	5	3	6	6	1	1	"	12	10	35	00	"	420 00	c	m	---	---	---
"	2244 13	"	"	---	s	---	---	---	---	12	1	"	12	10	26	00	"	312 00	c	m	---	---	---
"	2245 19	"	"	---	s	---	---	---	---	12	3	"	12	10	30	00	"	360 00	c	m	not answ'd	---	---
"	2246 22	"	"	---	s	---	---	---	---	12	6	"	12	10	40	00	"	480 00	c	m	same	---	---
"	2247 20	"	"	---	s	---	---	---	---	12	2	"	12	10	35	00	"	420 00	c	m	not answ'd	---	---
Feeding heads	2248 45	Ireland	Ireland	24	m	9	5	10	10	2	2	"	11 1/2	10	41	00	"	471 50	c	m	better	laborer	10 00 per mo
Mill runner	2249 45	"	"	26	m	7	4	8	8	20	20	"	12	10	65	00	"	780 00	c	m	lower	farmer	not answ'd
Slag breaker	2250 28	Canada	Canada	10	m	1	---	---	---	2	2	"	10 1/2	8	46	00	"	483 00	c	m	better	laborer	20 00 per mo
Boiler repalrer	2251 38	"	"	21	m	---	---	---	---	1	19	"	12	10	50	00	"	600 00	c	m	lower	---	---
Fishing copper	2252 24	Germany	Germany	6	s	---	---	---	---	8	8	"	12	8	45	00	"	540 00	c	m	not answ'd	not answ'd	not answ'd
"	2253 47	"	"	26	m	4	1	5	5	1	1	"	12	10	41	00	"	492 00	c	m	better	farming	---
Packing	2254 36	U. S.	U. S.	---	m	8	6	10	10	3	3	"	12	10	65	00	"	780 00	c	m	lower	---	---
Scaler	2255 18	"	"	---	s	---	---	---	---	4	4	"	11 1/2	10	33	00	"	371 25	c	m	not answ'd	---	---
Copper refiner	2256 45	England	England	19	m	5	2	7	7	9	2	"	11	10	75	00	"	825 00	c	m	---	---	---
Cooper	2257 27	England	England	---	m	1	---	---	---	2	1	"	12	13	60	00	"	720 00	c	m	better	---	---
Engineer	2258 34	"	"	16	m	4	4	5	5	16	1	"	12	10	60	00	"	720 00	c	m	---	engineer	40 00 per mo
"	2259 19	U. S.	U. S.	---	s	---	---	---	---	3	3	"	10 1/2	10	41	00	"	430 50	c	m	same	net answ'd	not answ'd
Carpenter	2260 39	Canada	Canada	23	m	6	5	7	7	16	16	"	12	10	63	00	"	756 00	c	m	lower	net answ'd	not answ'd
"	2261 29	"	"	22	m	1	---	---	---	8	2	"	9 1/2	10	53	50	"	555 75	c	m	same	farmer	not answ'd
"	2262 50	"	"	7	m	9	4	10	10	3	3	"	6	10	60	00	"	360 00	c	m	better	farmer	not answ'd

+ Refused.

TABLE NO. 7.—Continued.

Occupation.	Line number.	How many hours for a day's work in the old country.	Amount of money at interest or in the bank.	If foreign born, how much money did you have on arrival in U. S.	Do you own your home. If so, its value.	If mortgaged, amount of mortgage.	Rate of interest.	Are you as well off as five years ago.	Loss of time.			If renting home, monthly rental.	If boarding, cost per week, including room.	Life insurance, how much.	Do you belong to a benevolent society.	Weekly benefit in case of sickness or accident.	Have you a sewing machine.	Have you a piano.	Have you an organ.	Do you take a newspaper.			Age began work.	State of health then.	State of health now.	Amount of relief rendered friends in the old country.	Amount of money furnished to friends for passage to U. S.
									From sickness.—(Days.)	Inability to obtain work.—(Days.)	Causes not stated.—(Days.)									Daily.	Weekly.	Monthly.					
Miner.	2185			\$28	no			yes			\$3 00	\$5 00			no		yes	no	yes	no	12	good	good				
"	2186			12	"			"			3 00				"		no	"	"	"	13	"	"				
"	2187			25	"			"			3 00	5 00			yes		yes	"	"	"	15	"	"				
"	2188				"			"							no		no	"	"	"	19	"	"				
"	2189				"			"																			
"	2190				"			"		182	3 00						yes	"	"	"	12	"	"				
"	2191			18	"			"			3 00				"		"	"	"	"	15	"	"				
"	2192			18	"			"			3 00				"		no	"	"	"	16	"	"				
"	2193			85	"			"			3 00	5 00			yes		yes	"	"	"	11	"	"				
"	2194				"			"				5 00			no		no	"	"	"	15	"	"				
"	2195				"			yes							"		"	"	"	"	15	"	"				
"	2196			45	"			no			3 00				yes		yes	"	"	"	14	"	"				
"	2197				"			yes			4 00				"		no	"	"	"	16	"	"		\$150		
"	2198			35	"			"			3 00				"		no	"	"	"	16	"	"		100		
"	2199				"			"			5 00				"		yes	"	"	"	12	"	"				
"	2200			27	"			no			5 00		\$1,000		"		"	"	"	"	12	"	"				
"	2201			50	"			"			5 00				"		"	"	"	"	14	"	"		100		
"	2202			13	"			yes			5 00	4 50			"		no	"	"	"	12	"	"				
"	2203			35	"			"							"		"	"	"	"	16	"	"				
"	2204			12	"			"				4 00			"		"	"	"	"	14	"	"		100		
"	2205			27	"			"				4 00			"		"	"	"	"							
"	2206			60	"			"			4 00		1,000		"		yes	"	"	"	12	"	"		120		
"	2207			25	\$400			"							"		"	"	"	"	19	"	"				
"	2208			27	no			"			5 00				"		"	"	"	"	16	"	"				
"	2209			8	"			"			5 00				"		no	"	"	"	16	"	"				
"	2210			17	"			"				4 00			"		yes	"	"	"	16	"	"				
"	2211			17	"			"			5 00				"		yes	"	"	"	18	"	"				
"	2212				"			"			5 00				"		"	"	"	"	14	"	"		150		
"	2213			7	"			"			5 00				"		"	"	"	"	15	"	"		100		
"	2214			17	"			"			8 00		1,000		"		"	"	"	"	14	"	"				
"	2215			18	"			"			5 00				no		"	"	"	"	14	"	"		200		
"	2216				700			"							yes		"	"	"	"	14	"	"				
"	2217			7	no			"			3 00				"		no	"	"	"	14	"	"		50		

2218	"	10	17	"	13	18	5 00	4 00	2,000	6 00	yes	"	yes	"	yes	no	no	10	16	"	150
2219	Engineer	10	40	"	13	18	6 00	4 00	2,000	6 00	no	"	yes	"	no	yes	no	10	14	"	
2220	"	10	30	"	13	18	6 00	4 00	2,000	6 00	yes	"	yes	"	no	yes	no	10	14	"	
2221	Rock boss	8	17	"	13	18	15 00	4 00	2,000	6 00	yes	"	yes	"	no	yes	no	10	14	"	
2222	"	10	17	"	13	18	15 00	4 00	2,000	6 00	yes	"	yes	"	no	yes	no	10	14	"	
2223	Mine captain	10	13	"	13	18	5 00	4 00	2,000	6 00	yes	"	yes	"	no	yes	no	10	14	"	
2224	Carpenter	10	13	"	13	18	5 00	4 00	2,000	6 00	yes	"	yes	"	no	yes	no	10	14	"	
2225	"	10	13	"	13	18	5 00	4 00	2,000	6 00	yes	"	yes	"	no	yes	no	10	14	"	
2226	"	10	13	"	13	18	5 00	4 00	2,000	6 00	yes	"	yes	"	no	yes	no	10	14	"	
2227	Machinist	10	13	"	13	18	5 00	4 00	2,000	6 00	yes	"	yes	"	no	yes	no	10	14	"	
2228	Blacksmith	10	13	"	13	18	5 00	4 00	2,000	6 00	yes	"	yes	"	no	yes	no	10	14	"	
2229	"	10	13	"	13	18	5 00	4 00	2,000	6 00	yes	"	yes	"	no	yes	no	10	14	"	
2230	Trammer	10	13	"	13	18	5 00	4 00	2,000	6 00	yes	"	yes	"	no	yes	no	10	14	"	
2231	"	10	13	"	13	18	5 00	4 00	2,000	6 00	yes	"	yes	"	no	yes	no	10	14	"	
2232	Laborer	10	13	"	13	18	5 00	4 00	2,000	6 00	yes	"	yes	"	no	yes	no	10	14	"	
2233	"	10	13	"	13	18	5 00	4 00	2,000	6 00	yes	"	yes	"	no	yes	no	10	14	"	
2234	"	10	13	"	13	18	5 00	4 00	2,000	6 00	yes	"	yes	"	no	yes	no	10	14	"	
2235	"	10	13	"	13	18	5 00	4 00	2,000	6 00	yes	"	yes	"	no	yes	no	10	14	"	
2236	"	10	13	"	13	18	5 00	4 00	2,000	6 00	yes	"	yes	"	no	yes	no	10	14	"	
2237	"	10	13	"	13	18	5 00	4 00	2,000	6 00	yes	"	yes	"	no	yes	no	10	14	"	
2238	"	10	13	"	13	18	5 00	4 00	2,000	6 00	yes	"	yes	"	no	yes	no	10	14	"	
2239	"	10	13	"	13	18	5 00	4 00	2,000	6 00	yes	"	yes	"	no	yes	no	10	14	"	
2240	"	10	13	"	13	18	5 00	4 00	2,000	6 00	yes	"	yes	"	no	yes	no	10	14	"	
2241	"	10	13	"	13	18	5 00	4 00	2,000	6 00	yes	"	yes	"	no	yes	no	10	14	"	
2242	"	10	13	"	13	18	5 00	4 00	2,000	6 00	yes	"	yes	"	no	yes	no	10	14	"	
2243	"	10	13	"	13	18	5 00	4 00	2,000	6 00	yes	"	yes	"	no	yes	no	10	14	"	
2244	"	10	13	"	13	18	5 00	4 00	2,000	6 00	yes	"	yes	"	no	yes	no	10	14	"	
2245	"	10	13	"	13	18	5 00	4 00	2,000	6 00	yes	"	yes	"	no	yes	no	10	14	"	
2246	"	10	13	"	13	18	5 00	4 00	2,000	6 00	yes	"	yes	"	no	yes	no	10	14	"	
2247	"	10	13	"	13	18	5 00	4 00	2,000	6 00	yes	"	yes	"	no	yes	no	10	14	"	
2248	Feeding heads	12	12	yes	13	18	6 00	4 00	1,000	6 00	yes	"	yes	"	no	yes	no	10	14	"	
2249	Mill runner	12	12	yes	13	18	6 00	4 00	1,000	6 00	yes	"	yes	"	no	yes	no	10	14	"	
2250	Slag breaker	12	12	b't'r	19	19	12 00	4 00	3,000	12 00	yes	"	yes	"	no	yes	no	10	14	"	
2251	Boiler repairer	12	12	yes	19	19	6 00	4 00	1,000	6 00	yes	"	yes	"	no	yes	no	10	14	"	
2252	Fishing copper	12	12	b't'r	19	19	4 00	5 00	1,000	4 00	no	"	yes	"	no	yes	no	10	14	"	
2253	Packing	12	12	yes	19	19	3 00	5 00	1,000	4 00	yes	"	yes	"	no	yes	no	10	14	"	
2254	Scaler	12	12	yes	19	19	3 00	5 00	1,000	4 00	yes	"	yes	"	no	yes	no	10	14	"	
2255	Copper refiner	12	12	no	18	18	8 00	4 50	1,000	6 00	yes	"	yes	"	no	yes	no	10	14	"	
2256	Cooper	1,000	28	b't'r	18	18	10 00	4 50	1,000	10 00	yes	"	yes	"	no	yes	no	10	14	"	
2257	Engineer	1,000	28	yes	18	18	3 00	4 50	1,000	10 00	yes	"	yes	"	no	yes	no	10	14	"	
2258	"	10	55	"	18	18	5 00	4 50	1,000	10 00	yes	"	yes	"	no	yes	no	10	14	"	
2259	"	10	55	"	18	18	5 00	4 50	1,000	10 00	yes	"	yes	"	no	yes	no	10	14	"	
2260	Carpenter	1,500	100	yes	13	13	8 00	4 50	1,000	9 00	yes	"	yes	"	no	yes	no	10	14	"	
2261	"	1,500	100	b't'r	13	13	8 00	4 50	1,000	9 00	yes	"	yes	"	no	yes	no	10	14	"	
2262	"	1,500	200	yes	13	13	8 00	4 50	1,000	9 00	yes	"	yes	"	no	yes	no	10	14	"	

† Refused.

TABLE No. 7.—Continued.

Occupation.	Line number.	Age.	Nativity.	Nativity of parents.	How long in U. S., if foreign born.—(Years.)	Married or single.	How many children in family.	How many attend school.	How many depend on you for support.	How many years at present occupation.	How long with present employer.—(Years.)	Number of months employed during year.	How many hours for a day's work.	Wages paid.	Annual earnings.	Are you paid cash or trade.	How often are you paid.	Amount saved during the year.	How do wages compare with former years in this country.	What occupation did you follow in the old country.	Wages received in the old country.
Carpenter.....				Canada.....	9	m	4	1	5	9	9 yrs	10	10	\$12 00 pr m	\$50 00	c	m	+	better	brakeman	\$25 00 per mo
Head runner.....				Germany.....	19	m	4	1	3	16	12	12	10	45 00	504 00	c	m		not ans'd	miner	15 00 per mo
Mason.....				Germany.....	7	m	5	2	7	16	9	9	10	75 00	488 00	c	m	\$150	better	mason	25 50 "
".....				Canada.....	4	m	3	2	4	8	4	4	10	55 00	522 50	c	m		less	farmer	
Firing.....				Finland.....	5	m	3	2	4	1	8	4	8	30 00	175 50	c	m		better	"	10 40 per mo
Smelting.....				Germany.....	31	m	3	4	8	15	10 yrs	12	8	50 00	600 00	c	m		lower	farming	26 00 per mo
".....				Canada.....	30	m	3	2	4	25	10	12	11	95 00	444 80	c	m	240	better	"	
".....				Ireland.....	9	m	3	2	1	9	11	11	8	50 00	708 90	c	m		"	farming	not answered
".....				".....	5	s	1	1	3	1	1	13	8	45 00	561 00	c	m		same	smelting	30 00 per mo
Dipping copper.....				".....	8	m	1	1	3	9	11	11	8	60 00	675 00	c	m	80	better	farmer	9 10 "
".....				Germany.....	20	m	3	1	4	1	1	11	8	50 00	687 70	c	m		"	miner	20 00 "
".....				Ireland.....	22	m	4	1	6	1	1	11	10	70 00	787 50	c	m		"	carpenter	23 50 "
Laborer.....				".....	8	s	3	4	7	1	1	10	10	41 00	451 00	c	m		"	farmer	not answered
".....				Canada.....	11	m	3	4	7	1	1	10	10	45 00	472 50	c	m		same	"	"
".....				".....	20	s	3	4	7	1	1	10	10	41 00	492 00	c	m		"	"	"
".....				".....	10	m	3	1	8	1	1	10	10	40 00	503 00	c	m		"	"	5 00 per mo
".....				Ireland.....	10	s	3	1	8	1	1	10	10	41 00	410 00	c	m		not ans'd	"	20 00 "
".....				Scotland.....	3	s	3	1	3	1	1	10	10	35 00	367 50	c	m		lower	"	
Washing copper.....				".....	11	s	3	1	3	1	1	10	10	27 00	380 00	c	m		not ans'd	"	
".....				U. S.....	1	s	3	1	3	1	1	10	10	27 00	324 00	c	m	150	not ans'd	"	
".....				Germany.....	1	s	3	1	3	1	1	10	10	23 00	376 00	c	m		lower	not ans'd	not ans'd
".....				Canada.....	6	s	3	1	3	1	1	10	10	22 00	300 00	c	m		not ans'd	"	
".....				Ireland.....	6	s	3	1	3	1	1	10	10	27 00	324 00	c	m		not ans'd	"	
".....				Finland.....	1	s	3	1	3	1	1	10	10	27 00	384 00	c	m		better	farmer	10 40 per mo
Spare hand.....				".....	26	m	1	4	8	1	9	11	10	40 00	453 27	c	m		not ans'd	not ans'd	not ans'd
".....				Canada.....	21	m	7	4	6	1	1	11	10	43 00	453 00	c	m		same	farmer	
".....				".....	11	s	1	1	3	1	1	6	10	33 00	165 00	c	m	150	not ans'd	miner	18 00 per mo
".....				England.....	23	mp	1	1	2	3	8	10	10	41 00	410 00	c	m		better	"	
".....				Canada.....	23	s	3	1	3	4	1	10	10	33 00	346 50	c	m		not ans'd	"	
".....				U. S.....	1	s	3	1	3	1	1	12	10	32 00	384 00	c	m	100	not ans'd	"	

Germany	20	m	6	4	7	15	15	"	10%	10	43	00	"	451	00	c	m	lower	not answ'd	not answered
"	20	m	4	4	7	12	12	"	10%	10	43	00	"	441	00	c	m	"	"	"
Canada	23	m	2	2	3	12	12	"	10%	10	43	00	"	406	00	c	m	"	not answ'd	not answered
Switzerland	24	m	2	2	3	12	12	"	10%	10	43	00	"	610	00	c	m	"	not answ'd	not answered
Ireland	12	m	2	2	1	12	12	"	10%	10	43	00	"	900	00	c	m	"	not answ'd	not answered
"	6	m	1	1	1	4	6	"	11%	8	80	00	"	706	00	c	m	"	"	"
England	23	m	3	3	3	8	12	"	11	10	63	00	"	588	00	c	m	"	"	"
"	---	m	3	3	4	4	12	"	13	10	46	00	"	552	00	c	m	"	"	"
"	---	m	3	3	4	1	1	"	12	11	72	00	"	864	00	c	m	"	"	"
"	---	m	3	3	1	1	1	"	11%	10	36	00	"	306	50	c	m	"	"	"
"	---	m	---	---	---	---	---	"	13	10	50	00	"	600	00	c	m	"	"	"
Germany	12	m	---	---	1	4	4	"	11%	10	52	00	"	871	25	c	m	"	"	"
Scotland	---	m	---	---	---	2	2	"	11	10	82	00	"	852	00	c	m	"	"	"
"	1	m	---	---	---	1	1	"	11%	10	38	00	"	828	00	c	m	"	"	"
"	1	m	---	---	---	1	1	"	13	10	30	00	"	880	00	c	m	"	not answ'd	not answered
Canada	23	m	1	1	3	2	2	"	11	10	52	00	"	572	00	c	m	lower	not answ'd	not answered
Ireland	20	m	2	2	3	1	20	"	9%	11	60	00	"	566	00	c	m	"	not answ'd	not answered
France	17	m	4	4	6	2	2	"	12	8	60	00	"	720	00	c	m	"	farmer	4 00 per mo
Finland	---	m	7	4	8	17	17	"	12	8	65	00	"	760	00	c	m	"	"	not answered
Scotland	1	m	6	2	7	1	1	"	12	13	60	00	"	720	00	c	m	"	"	not answered
Canada	21	m	3	3	9	1	1	"	11%	12	60	00	"	680	00	c	m	"	"	15 00 per mo
"	16	m	2	2	6	9	9	"	10%	10	43	00	"	451	50	c	m	"	not answ'd	not answered
England	---	m	3	1	4	1	1	"	12	10	43	00	"	516	00	c	m	"	farmer	not answered
Germany	---	m	8	---	---	4	4	"	12	10	43	00	"	516	00	c	m	"	"	not answered
"	---	m	8	---	---	6	6	"	10%	10	40	00	"	430	00	c	m	"	"	not answered
Ireland	---	m	---	---	---	4	4	"	12	10	50	00	"	630	00	c	m	"	"	15 00 per mo
"	---	m	---	---	---	16	16	"	12	10	40	00	"	480	00	c	m	"	"	not answered
England	---	m	---	---	---	8	8	"	13	10	40	00	"	480	00	c	m	"	"	not answered
Canada	17	m	2	1	3	4	4	"	13	10	40	00	"	480	00	c	m	"	lumberman	15 00 per mo
"	---	m	---	---	---	12	12	"	13	10	40	00	"	480	00	c	m	"	"	not answered
"	1	m	---	---	---	1	1	"	9	10	40	00	"	380	00	c	m	lower	not answ'd	not answered
"	13	m	---	---	---	7	7	"	12	10	40	00	"	480	00	c	m	"	not answ'd	not answered
"	8	m	---	---	---	1	1	"	9	10	39	00	"	351	00	c	m	"	not answ'd	not answered
"	7	m	---	---	---	1	1	"	12	10	39	00	"	361	00	c	m	"	farmer	not answered
Scotland	16	m	---	---	1	6	6	"	12	10	40	00	"	480	00	c	m	"	"	not answered
"	---	m	---	---	---	7	7	"	9	10	40	00	"	380	00	c	m	"	"	"
Germany	7	m	1	1	3	7	7	"	9	10	40	00	"	593	00	c	m	"	"	"
Canada	9	m	1	1	5	4	4	"	11	10	54	00	"	540	00	c	m	"	"	"
"	6	m	---	---	---	2	2	"	13	10	45	00	"	640	00	c	m	"	farmer	12 00 per mo
"	10	m	6	2	7	1	1	"	6%	10	40	00	"	260	00	c	m	"	"	16 00
"	---	m	---	---	---	10	10	"	11%	10	40	00	"	460	00	c	m	"	"	"
"	9	m	4	5	6	6	6	"	11%	10	40	00	"	470	00	c	m	"	"	12 00 per mo
"	9	m	7	5	6	5	5	"	12	10	40	00	"	480	00	c	m	"	farmer	not answered
"	9	m	1	1	7	7	7	"	9	10	40	00	"	360	00	c	m	"	"	not answered
"	7	m	1	1	2	1	1	"	9	10	40	00	"	360	00	c	m	"	farmer	not answered

TABLE NO. 7.—Continued.

Occupation.	Line number.	How many hours for a day's work in the old country.	Amount of money at interest or in the bank.	If foreign born, how much money did you have on arrival in U. S.	Do you own your home. If so, its value.	If mortgaged, amount of mortgage.	Rate of interest.	Are you as well off as five years ago.	Loss of time.			If renting home, monthly rental.	If boarding, cost per week, including room.	Life insurance, how much.	Do you belong to a benevolent society.	Weekly benefit in case of sickness or accident.	Have you a sewing machine.	Have you a piano.	Have you an organ.	Do you take a newspaper.			Age began work.	State of health then.	State of health now.	Amount of relief rendered friends in the old country.	Amount of money furnished to friends for passage to U. S.
									From sickness.—(Days.)	Inability to obtain work.—(Days.)	Causes not stated.—(Days.)									Daily.	Weekly.	Monthly.					
Carpenter.....	2263	13	+		\$500			yes	52			\$4 00		yes	\$3 00	yes	no	no	no	no	11	good	good				
Head runner.....	2264	14			no			"						no	15 00	no	"	yes	yes	yes	14	"	"				
Mason.....	2265	8	+	\$20	1,000			b't'r		156				yes		yes	"	"	"	"	14	"	"				
".....	2266	13	\$500		no			yes	52	13		4 50		"		"	"	no	no	no	14	"	"				
Firing.....	2267	12			"			no						"		yes	"	"	"	"	10	"	"				
".....	2268				"			yes						yes	6 00	"	"	"	"	"	10	"	"				
Smelting.....	2269	13		10	1,000			b't'r		65				yes	6 00	no	"	"	"	"	14	"	"				
".....	2270				1,000	\$700	6	yes						no	3 00	yes	"	"	yes	yes	14	"	"				
".....	2271	13		25	no			"		6				yes		"	"	"	"	no	15	"	"				
".....	2272				"			b't'r					4 75	"	6 00	no	"	"	"	"	14	"	"				
Dipping copper.....	2273	10		25	600			yes	19					no		yes	"	"	"	"	13	"	"				
".....	2274	12			no			"						yes	5 00	yes	"	"	"	"	9	"	"				
".....	2275	12	400		"			"		18			\$1 000	"	6 25	no	"	"	"	"	16	"	"				
Laborer.....	2276	12			"			"		26				no		"	"	"	"	"	11	"	"				
".....	2277				"			"						"		"	"	"	"	"	10	"	"				
".....	2278				400			"		39		4 75		yes	3 00	"	"	"	"	"	14	"	"				
".....	2279	13			no			"		52				no		yes	"	"	"	"	9	"	"				
".....	2280	13			800			"		52				"		yes	"	"	"	"	13	"	"				
".....	2281				no			"		39		4 50		"		no	"	"	"	"	14	"	"				
".....	2282				"			yes				5 00		yes	6 00	"	"	"	"	"	14	"	"				
Washing copper.....	2283				"									no		"	"	"	"	"	12	"	"				
".....	2284				"				6			4 50		no		"	"	"	"	"	12	"	"				
".....	2285			6	"							5 00		yes	6 00	"	"	"	"	"	12	"	"				
".....	2286				"			"		19		4 00		no		"	"	"	"	"	12	"	"				
".....	2287				"			"		52		4 00		"		"	"	"	"	"	15	"	"				
".....	2288				"			"				4 00		"		"	"	"	"	"	12	"	"				
Spare hand.....	2289	12			"			yes				4 00		"		"	"	"	"	"	12	"	"				
".....	2290				"			"		19				"		"	"	"	"	"	20	"	"				
".....	2291			30	700			no		18				"		yes	"	"	"	yes	14	"	"				
".....	2292				no			"		182		5 00		"		no	"	"	"	"	16	"	"				
".....	2293	8			"			yes	13	39				yes	4 00	yes	"	"	"	"	7	"	"				
".....	2294				"			"		39		4 00		no		no	"	"	"	"	14	"	"				
".....	2295				"							4 50		"		"	"	"	"	"	13	"	"				

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‡ Refused.

Head feeder.....	2374	17	"	"	"	1	6	"	12	10	48	00	516	00	c	m	"
Head runner.....	2375	32	"	"	"	6	1	"	11	10	46	00	508	00	c	m	"
"	2376	17	"	"	"	1	4	"	12	10	46	00	552	00	c	m	.....	"	.....	.....
Blacksmith.....	2377	21	"	"	"	7	6	"	12	10	40	00	480	00	c	m	.....	"	.....	.....
Silver man.....	2378	16	"	"	"	1	1	"	12	10	28	00	312	00	c	m	.....	"	.....	.....
Stamping copper.....	2379	33	"	"	Ireland	13	4	"	10	10	43	00	430	00	c	m	.....	"	.....	.....
Head runner.....	2380	48	"	"	"	13	2	"	11	10	47	00	552	26	c	m	.....	"	.....	.....
Laborer.....	2381	24	"	"	"	7	7	"	11	10	45	00	517	50	c	m	.....	"	.....	.....
"	2382	46	"	"	"	8	4	"	12	10	40	00	480	00	c	m	.....	"	.....	not answered
"	2383	60	"	"	"	14	14	"	10	10	40	00	420	00	c	m	.....	"	.....	.....
Stamping copper.....	2384	50	"	"	England	6	2	"	11	10	43	00	473	00	c	m	.....	"	.....	20 00 per mo
Cooper.....	2385	49	"	"	"	2	2	"	12	10	50	00	600	00	c	m	.....	"	.....	not answered
Machinist.....	2386	46	"	"	"	2	2	"	12	10	65	00	780	00	c	m	.....	"	.....	.....
Carpenter.....	2387	40	"	"	"	6	6	"	11	10	55	00	646	25	c	m	.....	"	.....	.....
"	2388	26	"	"	"	6	6	"	11	10	60	00	690	00	c	m	.....	"	.....	15 00 per mo
"	2389	40	"	"	Germany	25	13	"	12	10	60	00	720	00	c	m	.....	"	.....	.....
"	2390	15	"	"	"	13	15	"	12	10	55	00	660	00	c	m	.....	"	.....	.....
Laborer.....	2391	40	"	"	"	6	10	"	9	10	43	00	387	00	c	m	.....	"	.....	not answered
Machinist.....	2392	45	"	"	"	5	6	"	12	10	50	00	600	00	c	m	.....	"	.....	not ans'w'd
Stamping copper.....	2393	40	"	"	"	5	4	"	11	10	43	00	483	75	c	m	.....	"	.....	.....
Spare hand.....	2394	61	"	"	"	12	4	"	12	10	48	00	516	00	c	m	.....	"	.....	26 00 per mo
"	2395	32	"	"	"	3	1	"	12	10	48	00	516	00	c	m	.....	"	.....	16 90
Head feeder.....	2396	40	"	"	"	10	10	"	8	10	43	00	344	00	c	m	.....	"	.....	not ans'w'd
"	2397	30	"	"	"	2	2	"	12	10	48	00	516	00	c	m	.....	"	.....	52 00 per mo
Gen'l repairer.....	2398	32	"	"	England	4	3	"	11	10	60	00	675	00	c	m	.....	"	.....	.....
Book-keeper.....	2399	50	"	"	"	20	20	"	12	10	70	00	840	00	c	m	.....	"	.....	not ans'w'd
Supt. of mill.....	2400	49	"	"	Germany	20	20	"	11	10	130	00	1,527	50	c	m	.....	"	.....	.....
Watchman.....	2401	45	"	"	"	12	12	"	11	10	65	00	731	2	c	m	.....	"	.....	not ans'w'd
Foreman.....	2402	26	"	"	U. S.	6	6	"	11	10	80	00	940	00	c	m	.....	"	.....	.....
Scaler.....	2403	35	"	"	Scotland	7	2	"	12	10	50	00	600	00	c	m	.....	"	.....	not ans'w'd
Spare hand.....	2404	38	"	"	Germany	4	1	"	12	10	45	00	540	00	c	m	.....	"	.....	.....
"	2405	19	"	"	"	1	1	"	10	10	45	00	450	00	c	m	.....	"	.....	.....
"	2406	26	"	"	England	1	2	"	10	10	43	00	451	50	c	m	.....	"	.....	.....
Surfaceman.....	2407	22	"	"	"	1	3	"	12	10	48	00	516	00	c	m	.....	"	.....	.....
"	2408	26	"	"	U. S.	3	10	"	12	10	43	00	516	00	c	m	.....	"	.....	.....
Carpenter.....	2409	31	"	"	Canada	2	13	"	11	10	60	00	680	00	c	m	.....	"	.....	not ans'w'd
"	2410	36	"	"	"	8	10	"	12	10	60	00	720	00	c	m	.....	"	.....	.....
"	2411	45	"	"	Scotland	6	10	"	12	10	60	00	720	00	c	m	.....	"	.....	.....
Washing copper.....	2412	21	"	"	England	2	2	"	12	10	33	00	396	00	c	m	.....	"	.....	.....
"	2413	28	"	"	Sweden	15	15	"	12	10	51	00	612	00	c	m	.....	"	.....	5 00 per mo
"	2414	23	"	"	Canada	10	5	"	11	10	43	00	483	75	c	m	.....	"	.....	.....
"	2415	20	"	"	England	3	8	"	11	10	30	00	345	00	c	m	.....	"	.....	.....
Fireman.....	2416	24	"	"	Canada	12	1	"	11	8	52	00	572	00	c	m	.....	"	.....	.....
"	2417	42	"	"	Germany	14	14	"	12	10	55	00	660	00	c	m	.....	"	.....	20 00 per mo
"	2418	29	"	"	Canada	6	5	"	12	6	50	00	600	00	c	m	.....	"	.....	.....

† Refused.

TABLE NO. 7.—Continued.

Occupation.	Line number.	How many hours for a day's work in the old country.	Amount of money at interest or in the bank.	If foreign born, how much money did you have on arrival in U. S.	Do you own your home. If so, its value.	If mortgaged, amount of mortgage.	Rate of interest.	Are you as well off as five years ago.	Loss of time.			If renting home, monthly rental.	If boarding, cost per week, including room.	Life insurance, how much.	Do you belong to a benevolent society.	Weekly benefit in case of sickness or accident.	Have you a sewing machine.	Have you a piano.	Have you an organ.	Do you take a newspaper.			Age began work.	State of health then.	State of health now.	Amount of relief rendered friends in the old country.	Amount of money furnished to friends for passage to U. S.
									From sickness—(Days.)	Inability to obtain work.—(Days.)	Causes not stated.—(Days.)									Daily.	Weekly.	Monthly.					
Surface man	2341	.....	.....	.....	\$700	.....	.....	yes	26	13	.....	\$8 00	.....	.....	yes	\$6 00	no	no	no	no	no	14	good	bad	.....	.....
Spare hand	2342	.....	.....	\$60	no	.....	.....	"	13	.....	.....	.....	.....	.....	"	6 00	yes	.....	.....	.....	yes	16	good	good	.....	.....
"	2343	.....	.....	.....	800	.....	.....	"	.....	.....	.....	.....	.....	.....	"	6 00	no	.....	.....	.....	no	12	"	"	.....	.....
"	2344	12	.....	.....	1,000	.....	.....	"	.....	.....	.....	.....	.....	\$1,000	"	10 00	no	.....	.....	.....	no	14	"	"	.....	.....
"	2345	.....	.....	.....	no	.....	.....	"	13	.....	.....	.....	\$5 00	.....	"	10 00	.....	.....	.....	yes	yes	17	"	"	.....	.....
"	2346	.....	150	.....	"	.....	.....	"	.....	.....	.....	5 00	.....	.....	"	6 00	.....	.....	yes	no	no	17	"	"	.....	.....
Clerk	2347	.....	.....	.....	400	.....	.....	no	.....	.....	.....	8 00	.....	.....	"	6 00	yes	.....	yes	yes	yes	14	"	"	.....	.....
Fireman	2348	.....	.....	100	600	.....	.....	yes	26	.....	.....	.....	.....	.....	"	6 00	.....	.....	no	no	no	14	"	"	.....	.....
"	2349	.....	.....	100	1,000	.....	.....	"	26	.....	.....	.....	.....	.....	"	9 00	.....	.....	no	no	no	13	"	poor	poor	\$200
Head feeder	2351	.....	.....	.....	1,225	\$800	8	no	6	.....	.....	.....	.....	.....	"	6 00	.....	.....	.....	.....	.....	28	good	good	50	18
"	2352	.....	.....	.....	1,000	200	8	yes	13	.....	.....	.....	.....	.....	"	6 00	.....	.....	.....	.....	.....	14	poor	poor	.....	.....
Laborer	2353	900	200	8	"	52	"	6 00	no	no	14	"	fair	fair
"	2354	.....	150	.....	600	.....	.....	"	.....	6	.....	.....	.....	.....	"	6 00	.....	.....	.....	yes	yes	20	bad	bad	.....	.....
"	2355	12	.....	.....	950	.....	.....	"	.....	.....	.....	.....	.....	.....	"	10 00	.....	.....	.....	.....	.....	15	good	good	.....	.....
"	2356	.....	.....	.....	500	.....	.....	"	.....	.....	.....	.....	.....	.....	"	6 00	.....	.....	.....	.....	.....	16	poor	poor	.....	.....
"	2357	12	.....	.....	400	.....	.....	"	.....	.....	.....	.....	.....	.....	"	6 00	.....	.....	yes	no	no	15	good	good	.....	.....
Carpenter	2358	.....	.....	.....	800	.....	.....	"	.....	.....	.....	.....	.....	.....	"	19 00	.....	.....	.....	no	no	14	"	"	.....	.....
"	2359	13	.....	.....	900	250	8	"	39	.....	.....	8 00	.....	.....	"	16 00	.....	.....	no	yes	yes	14	poor	poor	.....	.....
"	2360	.....	8,000	.....	no	.....	.....	"	13	26	.....	.....	.....	.....	"	12 00	.....	.....	.....	no	no	16	good	good	.....	.....
"	2361	10	.....	.....	1,300	.....	.....	"	.....	.....	.....	.....	.....	.....	"	6 00	.....	.....	.....	.....	.....	15	"	"	.....	.....
"	2362	.....	.....	.....	800	.....	.....	"	.....	.....	.....	.....	.....	.....	"	6 00	.....	.....	yes	yes	yes	21	"	"	.....	.....
"	2363	.....	.....	.....	no	.....	.....	"	.....	.....	.....	.....	5 00	.....	"	10 00	no	.....	no	no	no	14	"	"	.....	.....
Washing copper	2364	.....	.....	.....	.....	.....	.....	"	.....	.....	.....	.....	5 00	.....	"	6 00	.....	.....	no	no	no	17	"	"	.....	.....
"	2365	.....	.....	.....	.....	.....	.....	"	13	.....	.....	.....	4 00	.....	"	6 00	.....	.....	.....	.....	.....	14	poor	poor	.....	.....
"	2366	.....	.....	.....	.....	.....	.....	"	18	19	.....	.....	4 50	.....	"	6 00	.....	.....	.....	yes	yes	14	good	good	.....	.....
Time keeper	2367	.....	.....	.....	1,500	.....	.....	yes	.....	.....	.....	.....	.....	.....	"	10 00	yes	.....	.....	.....	.....	18	"	"	.....	.....
Fireman	2368	.....	.....	.....	no	.....	.....	"	.....	.....	.....	.....	5 00	.....	"	6 00	no	.....	yes	no	no	18	"	"	.....	.....
Head runner	2369	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8 00	1,000	"	6 00	.....	.....	yes	no	no	17	"	"	.....	.....
"	2370	.....	.....	.....	.....	.....	.....	yes	.....	.....	.....	.....	5 00	.....	"	6 00	.....	.....	no	no	no	14	"	"	.....	.....
Engineer	2371	no	"	6 00	yes	yes	14	"	"	
Laborer	2372	yes	4 00	"	6 00	yes	no	15	"	"	
Washing copper	2373	"	5 00	"	8 00	no	no	11	"	"	

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! Refused.

LABOR AND INDUSTRIAL STATISTICS.

TABLE NO. 7.—Continued.

Occupation.	Line number.	Age.	Nativity.	Nativity of parents.	How long in U. S., if foreign born.—(Years.)	Married or single.	How many children in family.	How many attend school.	How many depend on you for support.	How many years at present occupation.	How long with present employer.—(Years.)	Number of months employed during year.	How many hours for a day's work.	Wages paid.	Annual earnings.	Are you paid cash or trade.	How often are you paid.	Amount saved during the year.	How do wages compare with former years in this country.	What occupation did you follow in the old country.	Wages received in the old country.
Fireman.....	2419 33	Canada	Canada	Canada	11	m	8	4	4	9	9 yrs	12	6	\$355 00 pr m	\$660 00	c	m	\$200	lower	farmer	not ans'd
Machinist.....	2420 48	"	"	"	13	m	7	4	8	13	"	11½	10	75 00	843 75	c	m	100	"	"	"
"	2421 44	"	"	"	21	m	1	1	1	21	"	10	10	52 00	520 00	c	m	150	"	"	"
Copper dresser..	2422 24	U. S.	Germany	Germany	...	m	1	2	2	9	"	12	10	50 00	600 00	c	m		"	"	"
"	2423 19	"	England	England	...	s	1	6	6	3	"	11½	10	35 00	411 25	c	m		"	"	"
"	2424 15	"	"	"	...	s	...	...	...	1	1	12	10	20 00	240 00	c	m		"	"	"
"	2425 60	England	"	"	38	m	...	1	1	1	"	11½	10	43 00	505 25	c	m		"	tin dresser	\$20 50 per mo
Head runner....	2426 35	"	"	"	15	m	2	2	2	2	"	11½	10	45 00	517 50	c	m		"	"	"
"	2427 56	"	"	"	18	m	4	1	1	13	"	11½	10	45 00	528 75	c	m		"	farmer	not ans'd
"	2428 24	U. S.	Germany	Germany	...	m	...	1	1	4	"	11½	10	45 00	528 75	c	m		"	"	"
"	2429 44	Canada	Canada	Canada	30	m	7	2	7	8	"	11	10	45 00	495 00	c	m		"	not ans'd	not ans'd
"	2430 50	"	Ireland	Ireland	27	m	5	3	6	1	"	11	10	45 00	495 00	c	m		"	not ans'd	not ans'd
Head feeder....	2431 41	"	Canada	Canada	9	m	4	3	5	3	"	10	10	43 00	430 00	c	m		"	mason	41 60 per mo
"	2432 69	Sweden	Sweden	Sweden	15	m	6	3	3	15	"	12	10	43 00	516 00	c	m		"	carpenter	20 00
"	2433 24	U. S.	England	England	...	s	...	1	1	4	"	12	10	43 00	516 00	c	m		"	"	"
"	2434 21	"	"	Germany	...	s	...	7	7	1	"	12	10	43 00	516 00	c	m		"	"	"
"	2435 19	"	"	"	...	s	...	4	4	1	"	12	10	43 00	504 00	c	m		"	"	"
Laborer.....	2436 52	Germany	Germany	"	23	m	4	...	...	2	"	11½	8	43 00	488 75	c	m		"	farmer	not ans'd
"	2437 50	Ireland	Ireland	Ireland	20	m	10	4	12	20	"	10½	10	46 00	494 50	c	m		"	not ans'w	"
"	2438 47	Scotland	Scotland	Scotland	5	m	5	1	6	8	"	9	10	40 00	380 00	c	m		"	farmer	"
"	2439 57	"	"	"	35	m	8	...	1	15	"	12	10	45 00	540 00	c	m		"	"	"
"	2440 65	"	"	"	16	m	11	1	3	4	"	11½	10	47 00	528 75	c	m		"	"	15 00 per mo
"	2441 17	U. S.	Ireland	Ireland	...	s	...	1	1	2	"	12	10	40 00	480 00	c	m		"	"	"
"	2442 22	"	"	"	...	s	...	7	7	7	"	11½	10	40 00	470 00	c	m		"	"	"
"	2443 35	"	"	"	...	m	6	4	7	13	"	12	10	46 00	552 00	c	m		"	"	"
"	2444 50	Canada	Canada	Canada	40	m	8	2	6	5	"	11½	10	40 00	450 00	c	m		"	"	"
"	2445 27	"	"	"	7	m	1	...	2	3	"	12	10	40 00	480 00	c	m		"	farmer	not ans'd
"	2446 37	"	"	"	6	m	5	2	6	5	"	8	10	40 00	320 00	c	m		"	leather finisher	40 00 per mo
"	2447 40	"	"	"	9	m	6	1	7	3	"	11½	10	40 00	470 00	c	m		"	not ans'd	not ans'd
Foreman.....	2448 29	U. S.	Germany	Germany	...	m	2	...	3	10	"	12	16	60 00	720 00	c	m		"	"	"
Watchman.....	2449 34	Canada	Canada	Canada	16	m	6	8	7	14	"	12	13	60 00	720 00	c	m		"	farmer	15 00 per mo
Smelting Copper	2450 27	"	"	"	10	m	1	...	2	5½	"	12	8	47 00	564 00	c	m		same	"	"
Fireman.....	2451 25	"	"	"	20	s	...	3	3	2	"	12	6	52 00	624 00	c	m		not ans'd	worse	"

Cooper.....	2452 55	U. S.	"	40	m	7	2	20 22	"	5 1/2	10	51 00	"	280 50	c	m	.....	lower	farmer	not ans'd
Taring.....	2453 31	Canada	"	1	s	.....	4	1 1	"	11 1/2	10	45 00	"	517 50	c	m	.....	"	clerk	85 00 per mo
Weighting coal.....	2454 18	Ireland.....	Scotland	6	s	.....	3	1 1	"	12	10	40 00	"	480 00	c	m	.....	b-tter	farmer	7 80
Smelting.....	2455 37	U. S.	Canada	.....	s	.....	.....	2 2	"	11 1/2	10	28 00	"	657 80	c	m	.....	lower	.....	.....
Washing copper	2456 19	"	"	.....	s	.....	.....	1 1	"	12	10	28 00	"	286 00	c	m	.....	.....	.....	.....
"	2457 20	"	"	.....	s	.....	.....	.....	"	.....	.....	.....	"	336 00	c	m	.....	.....	.....	.....
"	2458 20	Canada	"	8	s	.....	.....	6 5	"	12	13	30 00	"	360 00	c	m	.....	same	.....	.....
"	2459 18	U. S.	Germany	.....	s	.....	.....	2 1	"	11	10	33 00	"	368 00	c	m	.....	lower	.....	.....
Engineer.....	2460 30	"	"	.....	m	.....	.....	13 2	"	11 1/2	12	50 00	"	587 50	c	m	.....	"	farmer	not ans'd
"	2461 50	Germany	"	20	m	.....	.....	8 19	"	12	10	50 00	"	600 00	c	m	.....	"	.....	not ans'd
"	2462 75	"	"	39	m	.....	.....	15 18	"	8 1/2	10	62 00	"	527 00	c	m	.....	"	.....	25 00 per mo
Carpenter.....	2463 42	Canada	Scotland	8	m	.....	.....	8 8	"	11 1/2	10	60 00	"	675 00	c	m	.....	"	laborer	.....
"	2464 46	France	France	34	m	.....	.....	3 19	"	12	10	50 00	"	600 00	c	m	.....	"	farmer	not ans'd
"	2465 69	Germany	Germany	14	m	.....	.....	14 14	"	12	10	43 00	"	516 00	c	m	.....	"	.....	not ans'd
Head feeder.....	2466 49	"	"	36	m	.....	.....	3 3	"	12	10	43 00	"	516 00	c	m	.....	"	not ans'd	not ans'd
"	2467 49	England	England	20	m	.....	.....	1 1	"	12	10	40 00	"	480 00	c	m	.....	"	not ans'd	"
"	2468 27	Canada	Canada	6	m	.....	.....	1 1	"	10 1/2	10	40 00	"	420 00	c	m	.....	"	farmer	"
"	2469 50	"	"	10	m	.....	.....	9 8	"	6 1/2	10	40 00	"	260 00	c	m	.....	"	.....	"
"	2470 22	U. S.	Germany	.....	s	.....	.....	8 8	"	12	10	40 00	"	480 00	c	m	.....	"	blacksmith	20 00 per mo
"	2471 59	England	England	26	m	.....	.....	2 2	"	6	10	40 00	"	240 00	c	m	.....	"	fishing	not ans'd
"	2472 60	Scotland	Scotland	6	m	.....	.....	6 6	"	9	10	40 00	"	380 00	c	m	.....	"	farmer	"
"	2473 53	"	"	8	m	.....	.....	8 8	"	12	10	40 00	"	480 00	c	m	.....	less	not ans'd	"
"	2574 70	Ireland	Ireland	8	m	.....	.....	1 1	"	12	10	40 00	"	480 00	c	m	.....	lower	not ans'd	"
"	2475 53	"	"	8	m	.....	.....	8 1	"	12	10	40 00	"	480 00	c	m	.....	.....	farmer	"
"	2476 50	"	"	6	m	.....	.....	4 4	"	12	10	40 00	"	480 00	c	m	.....	better	"	"
"	2477 35	"	"	10	m	.....	.....	8 4	"	9 1/2	10	40 00	"	370 00	c	m	.....	lower	"	"
"	2478 50	Germany	Germany	25	m	.....	.....	10 7	"	11 1/2	10	41 00	"	461 25	c	m	.....	same	"	9 10 per mo
"	2479 55	"	"	51	m	.....	.....	4 3	"	11	12	50 00	"	550 00	c	m	.....	better	"	9 10
"	2480 48	"	"	39	m	.....	.....	22 16	"	12	10	40 00	"	480 00	c	m	.....	lower	.....	20 00 per mo
"	2481 22	Canada	Scotland	12	m	.....	.....	8 1	"	11 1/2	10	40 00	"	460 00	c	m	.....	better	laborer	.....
"	2482 47	"	Canada	8	m	.....	.....	7 7	"	8	10	40 00	"	320 00	c	m	.....	smaller	"	26 00
"	2483 17	"	England	12	s	.....	.....	1 1	"	12	10	26 00	"	312 00	c	m	.....	lower	laborer	20 00 per mo
"	2484 48	"	Canada	23	m	.....	.....	23 23	"	11	10	42 00	"	462 00	c	m	.....	"	.....	.....
"	2485 18	"	Scotland	6	s	.....	.....	1 1	"	9	10	40 00	"	380 00	c	m	.....	"	.....	.....
"	2486 39	"	Canada	25	m	.....	.....	15 15	"	11 1/2	10	43 00	"	483 75	c	m	.....	"	farmer	not ans'd
"	2487 38	"	"	8	m	.....	.....	5 5	"	11 1/2	10	40 00	"	450 00	c	m	.....	less	carpenter	10 00 per mo
"	2488 45	"	"	27	m	.....	.....	1 1	"	12	10	41 00	"	492 00	c	m	.....	same	.....	.....
"	2489 45	U. S.	Ireland	.....	m	.....	.....	5 2	"	12	10	40 00	"	480 00	c	m	.....	better	.....	.....
"	2490 23	"	"	.....	s	.....	.....	5 2	"	7	10	40 00	"	280 00	c	m	.....	worse	.....	.....
"	2491 19	"	"	.....	s	.....	.....	5 3	"	7 1/2	10	35 00	"	262 50	c	m	.....	lower	.....	.....
"	2492 17	"	Canada	.....	s	.....	.....	1 1	"	9	10	36 00	"	324 00	c	m	.....	"	.....	.....
"	2493 24	"	Scotland	.....	s	.....	.....	6 6	"	11 1/2	10	40 00	"	470 00	c	m	.....	"	.....	.....
"	2494 33	Canada	Canada	13	m	.....	.....	1 13	"	12	10	55 00	"	660 00	c	m	.....	"	engineer	50 00 per mo
"	2495 45	"	"	10	m	.....	.....	7 4	"	8 1/2	10	65 00	"	243 75	c	m	.....	same	not ans'd	not ans'd
"	2496 34	U. S.	England	.....	m	.....	.....	3 2	"	12	10	45 00	"	516 00	c	m	.....	better	.....	.....
"	2497 43	England	"	25	m	.....	.....	17 16	"	12	10	65 00	"	780 00	c	m	.....	same	not ans'd	not ans'd

LABOR AND INDUSTRIAL STATISTICS.

TABLE NO. 7.—Continued.

Occupation.	Line number.	How many hours for a day's work in the old country.	Amount of money at interest or in the bank.	If foreign born, how much money did you have on arrival in U. S.	Do you own your home. If so, its value.	If mortgaged, amount of mortgage.	Rate of interest.	Are you as well off as five years ago.	Loss of time.			If renting home, monthly rental.	If boarding, cost per week, including room.	Life insurance, how much.	Do you belong to a benevolent society.	Weekly benefit in case of sickness or accident.	Have you a sewing machine.	Have you a piano.	Have you an organ.	Do you take a newspaper.			Age began work.	State of health then.	State of health now.	Amount of relief rendered friends in the old country.	Amount of money furnished to friends for passage to U. S.
									From sickness.—	(Days.)	Inability to obtain work.—(Days.)	Causes not stated.—(Days.)								Daily.	Weekly.	Monthly.					
Fireman	2419				\$800			yes	18			\$3 00		\$1,000	yes	\$10 00	no	no	no	yes	no	no	13	good	good		
Machinist	2420		\$2,000		no			"	52			6 00			"	10 00	yes	"	"	yes	yes	yes	12	fair	good		
"	2421		1,500		800			"							"	6 00	no	"	"	"	"	no	16	good	"		
Copper dresser	2422		200		no			"	6						"	6 00	yes	"	"	no	no	no	14	"	"		
"	2423				"										"	3 00	no	"	"	"	"	"	14	"	"		
"	2424				"			yes	7				\$3 00	1,000	"	3 00	no	"	"	"	yes	"	14	"	"		
Head runner	2425	10			800			"	13					1,500	"	12 00	yes	"	"	"	"	"	10	"	"	\$80	
"	2426				800			"	6						"	15 00	no	"	"	"	"	"	20	"	"		
"	2427				no			"	6					1,000	"	6 00	no	"	"	no	no	yes	14	"	"		
"	2428												8 00		"	10 00	yes	"	"	yes	"	"	10	"	"		
"	2429				800			no	1		25				"	6 00	"	"	"	"	"	"	10	"	"		
"	2430			\$500	800			"	52						"	6 00	"	"	"	"	"	"	15	"	"		
Head feeder	2431	10		75	400	\$180	8	yes							"	6 00	"	"	"	"	"	"	15	"	"		
"	2432	10			800			"					8 00		"	6 00	"	"	"	"	yes	"	13	"	"		
"	2433				no			"							"	6 00	no	"	"	"	"	"	13	"	"		
"	2434				"			yes				5 00			"	6 00	"	"	"	"	no	"	14	"	"		
"	2435				"			"							"	6 00	"	"	"	"	"	"	13	"	"		
Laborer	2436			+	500			"	19						"	10 00	yes	"	"	yes	yes	"	14	"	poor		
"	2437				200			"	32						"	6 00	no	"	"	no	no	"	20	"	good		
"	2438				500			"							"	10 00	yes	"	"	yes	"	14	"	"			
"	2439				no			"							"	6 00	"	"	"	"	"	"	14	"	"		
"	2440	10			"			"	18						"	6 00	"	"	"	"	"	"	10	"	"		
"	2441				"			"					5 00		"	6 00	no	"	"	"	"	15	"	"			
"	2442				"			"	6				5 00		"	6 00	"	"	"	"	no	"	15	"	"		
"	2443				"			"							no	6 00	"	"	"	"	yes	"	12	"	"		
"	2444	13			800	250	8	"	5						yes	6 00	yes	"	"	yes	no	"	10	"	"		
"	2445				900			"							"	6 00	"	"	"	"	"	"	12	"	"		
"	2446				150			"	52						"	9 00	"	"	"	"	no	yes	13	"	poor		
"	2447	10			300			"			6				"	6 00	"	"	"	"	yes	no	12	"	fair		
Foreman	2448				no			"						2,000	"	6 00	"	"	"	"	yes	"	16	"	good		
Watchman	2449	13						"						1,500	"	12 00	"	"	"	"	no	"	10	"	"		
Smelting Copper	2450		2,000		1,000	200	10	"							"	4 00	"	"	"	yes	"	"	17	"	"		
Fireman	2451				500			"							"	6 00	no	"	"	no	yes	"	8	"	"		

PART VIII.

SUMMARY BY NATIONALITIES

OF

Tables No. 1, 2, 3, 4, 5, 6 and 7.

TABLE No. 8.—Summary by Nationalities of the labor employed in the Fire Clay, special canvassers and shown in Tables

Nativity.	Number.	Average years in U. S.	Civil condition.		Average number of hours for a day's work in the old country.	Average wages paid per month in the old country.	Average number of hours for a day's work in this country.	Average wages paid per month in this country.	Average earnings during past year.	Number having money on arrival in U. S.	Amount of money on arrival in U. S.
			Married.	Single.							
America.....	148		66	82			9.98 +	\$43 08 +	\$442 62 +		
England.....	55	13.2 +	39	16	8.8 +	\$23 13 +	8.9 +	40 92 +	383 12 +	15	\$2,610 00
Canada.....	89	12.6 +	49	40	12 3 +	20 87 +	10.1 +	43 35 +	387 74 +	23	2,133 00
Ireland.....	57	17.7 +	33	24	11.2 +	14 85 +	10 0 +	44 24 +	485 16 +	21	841 25
Scotland.....	24	16.3 +	16	8	10.1	23 63	9.2	42 86 +	355 36 +	6	829 00
Germany.....	71	9.7 +	50	21	11 8 +	9 39 +	10.1 +	39 58 +	397 53 +	20	4,924 00
Prussia.....	37	4.6 +	31	6	12	9 05 +	10	32 95	350 09	5	657 00
Norway.....	8	8.6 +	2	6	10 3 +	23 50	10	48 70	503 58 +	1	5 00
Poland.....	2	11.5	1	1	10.5	5 83 +	10	39 16 +	470 00		
Sweden.....	49	6.0 +	20	29	11 6	16 78 +	10.1 +	45 10 +	477 95 +	20	885 00
Austria.....	1	13	1		12	18 00	10	32 50	390 00		
Finland.....	76	2.1 +	45	31	11.9 +	13 90	10 +	43 04 +	363 62 +	6	118 00
Italy.....	4	1.25	2	2	14	9 53 +	10	39 00	458 25		
Russia.....	1	6	1		11		10	32 50	390 00	1	200 00
Newfoundland.....	1	1/2	1		10	32 50	8	45 50	273 00		
France.....	6	19.1 +	4	2	12	14 50	10	71 50	745 50	1	10 00
Switzerland.....	1	13		1	10		10	65 00	780 00	1	350 00
Denmark.....	1	8	1		11	12 00	12	43 33	519 98	1	30 00
Belgium.....	5	10.2	4	1	11.2	22 53 +	10	50 30	544 77 +		
Wales.....	18	12.8 +	11	7	10.5 +	27 65 +	8.6 +	43 84	353 28 +	4	82 00
New Brunswick.....	1	19		1			8	45 50	409 50		
Holland.....	64	9	45	19	10.2 +	18 88 +	10	84 11 +	335 32 +	9	507 00

Slate, Coal, Grindstone, Gypsum and Building Stone industries, as reported by No. 1, 2, 3, 4, 5 and 6 inclusive.

Savings.																	
No. having money on hand or in bank.	Am't of money on hand or in bank.	on hand or in bank.	No. who have homes.	Am't invested in homes.	No. who have sent money to friends in the old country.	Am't sent to friends in the old country.	No. renting homes.	Average monthly rental.	No. boarding.	Average cost per week for board, including room.	No. not reported owning homes, renting or boarding.	No. having life insurance.	Am't of life insurance.	No. belonging to benefit societies.	Average weekly benefit in case of sickness or accident.	No. having sewing machines.	No. taking newspapers.
21	81	1	31	\$40,150	15	\$1,475	24	\$4 85	57	\$3 78 +	38	15	\$22,050	7	\$6 28 +	50	73
3			23	19,000	15		14	4 22 +	16	3 56 +	3	0	8,500	11	3 63 +	32	31
4			28	15,085	8	864	23	2 80 +	26	3 45 +	3	3	8,200	11	4 54 +	33	48
5			14	10,850	23	4,427	18	4 34 +	23	3 86 +	2	7	10,000	4	6 28	18	27
2			10	11,150	11	852	7	3 65 +	8	3 74 +	2	3	2,000	2	5 50	11	17
7	840		36	24,350	9	900	16	3 70	19	3 80		7	8,000	10	3 90	29	34
2	850	3	9	7,380	1	30	8	2 84 +	4	3 25	16	7	3,650	15	3 00	4	10
1	10		1	800	1	45	2	4 75	0	4 41 +		1	500			1	3
2	400		11	5,105	15	1,617	7	3 78 +	31	4 12 +		1	1,000	1	4 00	7	20
2	700		1	125	50	6,654	1	2 25	52	3 62 +	21					1	1
					3	925	2	4 75	2	3 50						1	21
			1	550				2 50									
			2	725	1	90	2	4 10	1	3 00		1	3,000	1	10 00	4	4
										4 50							
1	600						1	4 00	1	4 50	1					1	1
1	500		2	880	4	403	10	5 16 +	4	4 25	2				1 00	3	3
								4 65		3 50						4	7
13	2,000	3	22	18,525	8	280	13	4 48 +	15	3 08 +		3	2,132			51	41

TABLE No. 9.—Summary by Nationalities of

Nativity.	Number.	Average Years in United States.	Average number of hours for a day's work in the old country.	Average wages paid per month in the old country.	Average number of hours for a day's work in this country.	Average wages paid per month in this country.	Average earnings during past year.	No. having money on arrival in United States.	Amount of money on arrival in United States.
America.....	560		28		9.9+	\$41 08+	\$464 00+		
England.....	557	15.8+	29	\$17 16+	10.0+	53 37+	609 71+	283	\$10,690 00
Canada.....	274	13.4+	34	10.9+	9.9+	47 25	518 05+	50	2,816 00
Ireland.....	166	19.3+	30	9.4+	9.9+	48 35+	554 41+	35	1,089 50
Scotland.....	49	18.9+	9	9.2+	9.8+	61 65+	716 92+	13	1,000 00
Germany.....	168	18.1+	29	10.5+	9.8+	45 01+	536 23+	51	2,249 30
Norway.....	69	8.0+	13	9.7+	10.3+	46 79+	557 34+	25	1,148 00
Poland.....	118	7.3+	22	12.0+	9.8+	45 35+	482 25+	56	2,025 00
Sweden.....	65	6.7+	28	10.8+	9.9+	49 75+	560 63+	34	1,002 00
Austria.....	156	3.	23	11.8+	9.3+	48 35+	513 81+	43	2,249 50
Finland.....	219	6.3+	33	12.5	9.9+	45 63+	519 19+	71	3,079 15
Italy.....	24	5.3+	13	13.0+	9.2+	51 41+	666 41+	13	291 00
Russia.....	1	6.		12.	9.	53 00	626 00		
France.....	13	13.3+	1	11.5	9.8+	50 61+	607 30+	4	123 00
Switzerland.....	6	19.		11.5	10.	44 50	454 73+	3	45 00
Denmark.....	1	2.	1	12	10.	45 00	540 00	1	20 00
Wales.....	6	14.8+	3	9.3+	10.	58 33+	700 00	2	120 00
Holland.....	1	12.		10.	10.	65 00	740 00		
Australia.....	1	6.	1		10.	35 00	403 50		
Spain.....	1	66.			10.	36 00	466 00	1	4 50
Nova Scotia.....	2	22.5	1	12.	10.	65 00	780 00	1	23 00

PART IX.

COMPARISON BY NATIONALITIES

OF

WAGES IN THE OLD COUNTRY

WITH

WAGES IN MICHIGAN.

TABLE No. 10.—Continued.

Occupation in England.	Wages per Month Received in Eng- land.	Present Occupation in Michigan.	Wages per Month in Michigan.	Occupation in England.	Wages per Month Received in Eng- land.	Present Occupation in Michigan.	Wages per Month in Michigan.
Miner.....	\$20 00	Miner.....	\$48 00	Miner.....	\$12 50	Miner.....	\$45 00
".....	20 00	".....	30 00	".....	15 00	".....	50 00
".....	15 00	".....	48 00	".....	15 00	".....	50 00
".....	15 00	".....	50 00	".....	15 00	".....	50 00
".....	20 00	".....	50 00	".....	15 00	".....	48 00
".....	17 00	".....	30 00	".....	20 00	".....	50 00
".....	15 00	".....	47 00	".....	15 00	".....	48 00
".....	15 00	".....	50 00	".....	20 00	".....	50 00
".....	15 00	".....	50 00	".....	7 50	".....	48 00
".....	20 00	".....	48 00	".....	15 00	".....	50 00
".....	15 00	".....	50 00	".....	15 00	".....	55 00
".....	20 00	".....	50 00	".....	15 00	".....	50 00
".....	15 00	".....	45 00	".....	15 00	".....	45 00
".....	14 00	".....	45 00	".....	15 00	".....	50 00
".....	15 00	".....	45 00	".....	15 00	".....	45 00
".....	15 00	".....	50 00	".....	17 00	".....	50 00
".....	15 00	".....	45 00	".....	17 00	".....	50 00
".....	18 00	".....	45 00	".....	15 00	".....	50 00
".....	17 00	".....	45 00	".....	17 00	".....	50 00
".....	15 00	".....	45 00	".....	15 00	".....	45 00
".....	15 00	".....	50 00	".....	15 00	".....	45 00
".....	15 00	".....	45 00	".....	17 00	".....	45 00
".....	15 00	".....	50 00	".....	17 00	".....	50 00
".....	17 00	".....	50 00	".....	17 00	".....	50 00
".....	15 00	".....	45 00	".....	17 00	".....	45 00
".....	17 00	".....	45 00	".....	15 00	".....	50 00
".....	17 50	".....	45 00	".....	15 00	".....	45 00
".....	17 50	".....	45 00	".....	15 00	".....	50 00
".....	15 00	".....	45 00	".....	15 00	".....	50 00
".....	15 00	".....	45 00	".....	15 00	".....	45 00
".....	15 00	".....	50 00	".....	17 00	".....	50 00
".....	15 00	".....	45 00	".....	15 00	".....	50 00
".....	15 00	".....	45 00	".....	15 00	".....	50 00
".....	15 00	".....	45 00	".....	17 00	".....	50 00
".....	17 00	".....	50 00	".....	15 00	".....	50 00
".....	17 00	".....	50 00	".....	15 00	".....	50 00
".....	15 00	".....	55 00	".....	15 00	".....	50 00
".....	15 00	".....	48 00	".....	15 00	".....	50 00
".....	10 00	".....	50 00	".....	15 00	".....	50 00
".....	20 00	".....	48 00	".....	15 00	".....	50 00
".....	15 00	".....	48 00	".....	15 00	".....	50 00
".....	15 00	".....	48 00	".....	15 00	".....	55 00
".....	15 00	".....	50 00	".....	15 00	".....	48 00
".....	15 00	".....	48 00	".....	15 00	".....	55 00
".....	15 00	".....	52 00	".....	15 00	".....	50 00
".....	15 00	".....	48 00	".....	15 00	".....	50 00
".....	15 00	".....	48 00	".....	17 00	".....	50 00
".....	28 00	".....	45 00	".....	15 00	".....	55 00
".....	15 00	".....	45 00	".....	15 00	".....	50 00
".....	15 00	".....	48 00	".....	15 00	".....	50 00
".....	15 00	".....	50 00	".....	17 00	".....	50 00
".....	15 00	".....	50 00	".....	20 00	".....	48 00
".....	30 00	".....	48 00	".....	15 00	".....	48 00
".....	15 00	".....	30 00	".....	15 00	".....	48 00
".....	15 00	".....	48 00	".....	20 00	".....	48 00
".....	15 00	".....	48 00	".....	15 00	".....	48 00
".....	15 00	".....	50 00	".....	15 00	".....	48 00
".....	15 00	".....	50 00	".....	15 00	".....	48 00
".....	15 00	".....	50 00	".....	15 00	".....	48 00
".....	15 00	".....	48 00	".....	15 00	".....	50 00
".....	15 00	".....	48 00	".....	15 00	".....	48 00
".....	17 00	".....	50 00	".....	15 00	".....	48 00

TABLE NO. 10.—Continued.

Occupation in England.	Wages per month received in England.	Present occupation in Michigan.	Wages per month in Michigan.	Occupation in England.	Wages per month received in England.	Present occupation in Michigan.	Wages per month in Michigan.
Miner.....	\$15 00	Miner.....	\$48 00	Miner.....	\$15 00	Mine capt.....	\$150 00
".....	15 00	".....	48 00	".....	15 00	".....	75 00
".....	15 00	".....	55 00	".....	6 25	".....	100 00
".....	12 00	".....	55 00	".....	20 00	".....	84 00
".....	15 00	".....	55 00	".....	15 00	".....	100 00
".....	15 00	".....	55 00	Stamp mill boy.....	5 00	".....	100 00
".....	15 00	".....	55 00	Miner.....	15 00	".....	100 00
".....	15 00	".....	55 00	".....	17 00	".....	80 00
".....	15 00	".....	50 00	Mine capt.....	40 00	Miner.....	50 00
".....	20 00	".....	48 00	".....	40 00	Sup't.....	250 00
".....	15 00	".....	48 00	".....	40 00	Supply clerk.....	80 00
".....	15 00	".....	38 00	Miner.....	15 00	Rock boss.....	65 00
".....	20 00	".....	48 00	".....	17 50	Laborer.....	55 00
".....	15 00	".....	48 00	".....	15 00	".....	40 00
".....	15 00	".....	48 00	".....	15 00	Brakeman.....	47 00
".....	15 00	".....	48 00	".....	15 00	Fireman.....	58 00
".....	15 00	".....	55 00	".....	15 00	Blacksmith.....	65 00
".....	15 00	".....	55 00	".....	15 00	Laborer.....	40 00
".....	15 00	".....	45 00	".....	25 00	Engineer.....	50 00
".....	15 00	".....	45 00	".....	15 00	Laborer.....	47 00
".....	15 00	".....	45 00	".....	15 00	".....	40 00
".....	15 00	".....	45 00	".....	22 00	".....	45 00
".....	17 00	".....	45 00	".....	18 00	Engineer.....	45 00
".....	15 00	".....	40 00	".....	12 00	Cooper.....	47 00
".....	20 00	".....	55 00	".....	30 00	Blacksmith.....	47 00
".....	15 00	".....	48 00	".....	3 75	Farmer.....	47 00
".....	20 00	".....	55 00	".....	4 00	Laborer.....	47 00
".....	15 00	".....	55 00	".....	7 50	Baker.....	47 00
".....	20 00	".....	55 00	".....	15 00	Head runner.....	46 00
".....	15 00	".....	48 00	".....	13 00	Laborer.....	41 00
".....	20 00	".....	48 00	".....	15 00	Fireman.....	58 00
".....	15 00	".....	48 00	".....	6 00	Laborer.....	35 00
".....	20 00	".....	55 00	".....	15 00	Machinist.....	45 00
".....	20 00	".....	55 00	".....	15 00	Fireman.....	40 00
".....	28 00	".....	50 00	".....	20 00	Copper cutter.....	50 00
".....	20 00	".....	52 00	".....	20 00	Engineer.....	48 00
".....	20 00	".....	52 00	".....	15 00	Timberman.....	47 00
".....	20 00	".....	65 00	".....	15 00	Copper dresser.....	60 00
".....	18 00	".....	50 00	".....	15 00	Timberman.....	65 00
".....	25 00	".....	28 00	".....	15 00	Blacksmith helper.....	45 00
".....	40 00	".....	45 50	".....	15 00	Laborer.....	58 00
".....	28 00	".....	52 00	".....	15 00	Machinist.....	60 00
".....	28 00	".....	28 00	".....	20 00	Laborer.....	50 00
".....	28 00	".....	39 00	".....	20 00	".....	40 00
".....	28 00	".....	39 00	".....	15 00	Engineer.....	48 00
".....	32 50	".....	45 50	".....	15 00	Teamster.....	47 00
".....	28 00	".....	32 50	".....	18 00	Miner helper.....	32 00
".....	30 00	".....	32 50	".....	15 00	Laborer.....	40 00
".....	28 00	".....	45 50	".....	15 00	Boiler maker.....	45 00
".....	53 50	".....	39 00	".....	15 00	Trammer.....	58 00
".....	19 50	".....	32 50	".....	15 00	Timberman.....	58 00
".....	9 00	".....	39 00	".....	15 00	Dryman.....	40 00
".....	32 50	".....	45 50	".....	15 00	Timberman.....	60 00
".....	28 00	".....	39 00	".....	17 00	".....	60 00
".....	28 00	".....	45 50	Laborer.....	4 50	Miner.....	55 00
".....	19 50	".....	39 00	".....	8 00	".....	55 00
".....	28 00	".....	39 00	".....	15 00	".....	48 00
".....	19 50	".....	52 00	Machinist.....	25 00	".....	48 00
".....	32 50	".....	45 50	Engineer.....	20 00	".....	48 00
".....	18 00	".....	52 00	Stamping copper.....	20 00	".....	48 00
".....	32 50	".....	45 50	Carpenter.....	15 00	".....	60 00
".....	28 00	".....	39 00	Mine laborer.....	15 00	".....	48 00
".....	28 00	".....	39 00	Surface boss.....	15 00	".....	65 00
Average.....	\$16 61+	Average.....	\$48 76+				

LABOR AND INDUSTRIAL STATISTICS.

TABLE No. 10.—Continued.

Occupation in England.	Wages per month received in England.	Present occupation in Michigan.	Wages per month in Michigan.	Occupation in England.	Wages per month received in England.	Present occupation in Michigan.	Wages per month in Michigan.
Timberman.....	\$15 00	Miner.....	\$53 00	Tin dresser.....	\$20 00	Copper dresser	\$50 00
Sawyer.....	25 00	".....	48 00	".....	30 50	".....	48 00
Teamster.....	27 00	".....	50 00	".....	20 00	".....	30 00
Laborer.....	7 50	".....	52 00	Pattern maker.	20 00	Pattern maker	70 00
Agent.....	28 00	".....	50 00	Mason.....	20 00	Mason.....	60 00
Engineer.....	17 50	".....	50 00	".....	19 50	".....	65 00
Clerk.....	12 00	".....	48 00	Carpenter.....	20 00	Carpenter.....	65 00
Time keeper ..	25 00	".....	48 00	".....	15 00	".....	50 00
Laborer.....	15 00	".....	60 00	".....	20 00	".....	60 00
Blacksmith.....	20 00	Blacksmith.....	70 00	".....	20 00	".....	55 00
".....	20 00	".....	68 00	".....	15 00	".....	45 00
".....	25 00	".....	70 00	Miner.....	32 50	Quarryman.....	45 50
".....	18 00	".....	53 00	Shoemaker	39 00	Teamster	39 00
".....	35 00	".....	65 00	Blacksmith.....	32 50	Blacksmith.....	35 50
".....	35 00	".....	65 00	".....	32 50	".....	45 50
".....	20 00	".....	65 00	Farmer.....	10 40	Miner.....	32 50
".....	25 00	".....	65 00	".....	6 00	Engineer.....	52 00
".....	20 00	".....	70 00	Laborer.....	19 50	Teamster.....	45 50
".....	20 00	".....	60 00	".....	20 00	Laborer.....	32 50
".....	20 00	".....	65 00	".....	9 60	".....	32 50
".....	20 00	".....	69 00	Salesman.....	20 00	".....	32 50
".....	45 00	".....	65 00	Stone cutter.....	25 20	Stone cutter ..	104 00
".....	17 50	".....	65 00	Brick maker	12 48	Brick layer.....	39 00
".....	20 00	Laborer.....	40 00	Clay molder.....	45 50	Clay molder.....	52 00
".....	20 00	Fireman.....	58 00	Farmer	4 17	Miner.....	39 00
Machinist.....	35 00	Machinist.....	100 00	".....	2 08	".....	39 00
".....	20 00	".....	65 00	Sailor.....	12 00	".....	39 00
".....	30 00	".....	75 00	Fireman.....	28 00	".....	39 00
".....	25 00	Timberman.....	48 00	Blacksmith.....	32 50	Engineer.....	52 00
".....	20 00	Supply clerk.....	50 00	Laborer.....	19 50	Laborer.....	39 00
Engineer.....	17 00	Machinist.....	55 00	Average.....	\$19 07 +	Average.....	\$56 66 +
Molder.....	37 00	".....	47 00				

TABLE NO. 11.—Statement by Finlanders engaged in the Fire Clay, Slate, Coal, Grind-stone, Gypsum, Stone and Copper Industries showing occupation and wages received in Finland and occupation and present wages in Michigan.

Occupation in Finland.	Wages per month received in Finland.	Present occupation in Michigan.	Wages per month in Michigan.	Occupation in Finland.	Wages per month received in Finland.	Present occupation in Michigan.	Wages per month in Michigan.
Farmer.....	\$4 00	Cooper.....	\$65 00	Farmer.....	\$3 83	Laborer.....	\$30 00
Shoemaker.....	23 00	Laborer.....	48 00	".....	1 67	Miner.....	50 00
Farmer.....	2 50	".....	45 00	".....	8 83	".....	45 00
Laborer.....	3 83	".....	45 00	".....	8 83	".....	50 00
".....	3 83	".....	39 00	".....	1 67	Laborer.....	55 00
".....	3 83	".....	45 00	".....	1 67	Trammer.....	54 00
".....	15 00	Miner.....	48 00	Laborer.....	8 83	Timberman.....	48 00
Farmer.....	2 50	".....	48 00	".....	8 83	".....	48 00
".....	2 50	".....	48 00	".....	8 83	Accountant.....	38 00
".....	2 50	".....	48 00	".....	8 83	Laborer.....	50 00
".....	2 50	".....	48 00	".....	10 40	Trammer.....	53 00
".....	2 50	Timberman.....	48 00	".....	10 40	".....	53 00
".....	2 08	Laborer.....	39 00	Farmer.....	1 67	".....	53 00
Carpenter.....	10 40	".....	47 00	Laborer.....	10 40	Miner.....	45 00
Wood chopper..	25 00	Watchman.....	50 00	Shoemaker.....	10 00	".....	55 00
Musician.....	30 00	Painter.....	50 00	Farmer.....	10 00	Timberman helper	45 00
Dyer.....	25 00	Timberman.....	48 00	".....	4 17	Trammer.....	52 00
Laborer.....	3 83	".....	48 00	".....	4 17	".....	52 00
Farmer.....	3 83	".....	48 00	".....	10 00	Laborer.....	45 00
".....	3 83	".....	48 00	".....	5 00	Miner.....	55 00
Laborer.....	3 83	".....	48 00	".....	13 00	Trammer.....	53 00
".....	3 83	".....	48 00	".....	11 00	".....	39 00
".....	3 83	".....	48 00	".....	12 00	Miner.....	53 00
Farmer.....	3 83	Miner.....	50 00	".....	13 00	".....	53 00
Teacher.....	50 00	".....	50 00	Laborer.....	8 00	Laborer.....	37 00
Farmer.....	3 83	".....	55 00	".....	12 00	".....	35 00
Laborer.....	3 83	".....	48 00	Blaster.....	19 50	Blaster.....	45 50
Farmer.....	3 83	".....	60 00	Farmer.....	6 25	Laborer.....	39 00
Laborer.....	3 83	Trammer.....	53 00	Sailor.....	14 00	".....	36 00
".....	3 83	".....	53 00	Laborer.....	6 50	".....	42 00
".....	3 83	".....	53 00	Farmer.....	12 00	".....	36 00
Carpenter.....	3 83	Carpenter.....	52 00	Miner.....	15 00	Miner.....	50 00
Farmer.....	2 17	Trammer.....	45 00	Timberman.....	25 00	".....	50 00
".....	3 83	".....	45 00	Farmer.....	10 00	".....	50 00
Laborer.....	3 83	Laborer.....	38 00	".....	10 00	".....	50 00
Farmer.....	4 17	Miner.....	47 00	Molder.....	20 00	".....	50 00
".....	4 17	".....	47 00	Sailor.....	2 08	".....	45 00
".....	10 40	Fireman.....	39 00	Carpenter.....	17 00	Carpenter.....	55 00
".....	10 40	Laborer.....	39 00	Laborer.....	10 00	Trammer.....	60 00
Laborer.....	3 83	Timberman help'r	48 00	".....	8 00	".....	48 00
".....	3 83	".....	48 00	Farmer.....	10 00	Laborer.....	38 00
".....	3 83	".....	48 00	".....	5 00	".....	39 00
".....	3 83	".....	48 00	".....	10 00	".....	48 00
".....	3 83	Miner.....	50 00	".....	5 00	Trammer.....	53 00
Farmer.....	3 83	".....	50 00	Laborer.....	16 00	".....	53 00
".....	3 83	".....	50 00	".....	16 00	".....	53 00
".....	3 83	".....	55 00	".....	16 00	Miner.....	48 00
Laborer.....	3 83	".....	50 00	Farmer.....	5 00	Timberman helper	48 00
Fisherman.....	12 00	".....	50 00	Sailor.....	14 00	".....	48 00
Laborer.....	3 83	".....	48 00	Shoemaker.....	16 00	Trammer.....	48 00
Farmer.....	3 83	Laborer.....	45 00	Farmer.....	10 00	Miner.....	50 00
Laborer.....	3 83	Trammer.....	50 00	Miner.....	12 00	".....	45 00
".....	3 83	".....	53 00	Laborer.....	8 00	".....	45 00
Farmer.....	3 83	".....	53 00	Miner.....	16 00	".....	45 00
Carpenter.....	10 80	Carpenter.....	52 00	".....	16 00	".....	45 00
Farmer.....	3 83	Miner.....	48 00	".....	12 00	".....	45 00
Laborer.....	3 83	".....	48 00	".....	10 00	".....	50 00
Farmer.....	3 83	Laborer.....	39 00	Laborer.....	8 00	".....	50 00
Laborer.....	3 83	".....	39 00	Painter.....	26 00	Painter.....	52 00
".....	3 83	".....	39 00	Laborer.....	16 00	Timber boss....	63 00

TABLE No. 11.—Continued.

Occupation in Finland.	Wages per month received in Fin-land.	Present occupation in Michigan.	Wages per month in Michigan.	Occupation in Finland.	Wages per month received in Fin-land.	Present occupation in Michigan.	Wages per month in Michigan.
Sawyer.....	\$28 00	Timberman.....	\$48 00	Farmer.....	\$14 80	Laborer.....	\$39 00
Farmer.....	5 00	".....	48 00	".....	14 80	Quarryman.....	39 00
Laborer.....	15 00	".....	48 00	".....	14 80	Laborer.....	39 00
Farmer.....	5 00	Trammer.....	58 00	".....	14 80	".....	39 00
".....	5 00	Miner.....	55 00	".....	14 80	".....	39 00
".....	10 00	".....	48 00	".....	14 80	".....	45 50
Carpenter.....	25 00	Carpenter.....	50 00	".....	14 80	".....	39 00
".....	25 00	".....	54 00	Laborer.....	11 70	Scabblor.....	52 00
Laborer.....	3 88	Timberman.....	48 00	".....	11 70	".....	52 00
".....	8 00	Trammer.....	40 00	Farmer.....	14 80	".....	52 00
".....	8 00	".....	40 00	".....	14 80	".....	52 00
".....	8 00	".....	40 00	Laborer.....	18 00	".....	52 00
".....	8 00	Laborer.....	35 00	".....	18 00	".....	52 00
Fisherman.....	2 00	".....	35 00	".....	18 00	".....	52 00
Laborer.....	10 00	Miner.....	45 00	".....	1 00	".....	52 00
".....	3 88	Laborer.....	30 00	Farmer.....	14 80	".....	39 00
Sawyer.....	10 40	".....	39 00	".....	14 80	Laborer.....	39 00
Farmer.....	3 88	".....	39 00	".....	14 80	".....	45 50
".....	2 50	Miner.....	48 00	Laborer.....	11 70	".....	45 50
Laborer.....	3 88	Laborer.....	39 00	Farmer.....	14 80	".....	45 50
Carpenter.....	18 90	Carpenter.....	54 00	".....	14 80	".....	52 00
Laborer.....	2 50	Miner.....	48 00	".....	14 80	".....	39 00
Farmer.....	7 50	Fireman.....	50 00	".....	14 80	".....	39 00
".....	7 50	Miner.....	45 00	".....	14 80	".....	39 00
".....	7 50	".....	50 00	".....	14 80	".....	39 00
".....	7 50	".....	45 00	Laborer.....	18 00	".....	39 00
".....	15 00	Laborer.....	35 00	Farmer.....	14 80	".....	39 00
".....	15 00	".....	32 00	Laborer.....	18 00	".....	39 00
".....	7 50	".....	38 00	".....	18 00	".....	45 50
".....	7 50	".....	38 00	".....	18 00	".....	39 00
Sawyer.....	8 50	".....	37 00	".....	18 00	".....	39 00
Farmer.....	7 50	".....	45 00	".....	14 80	".....	45 50
Warden.....	14 00	Miner.....	36 88	".....	14 80	".....	45 50
Miner.....	16 90	".....	36 88	Teamster.....	14 80	".....	45 50
Ship carpenter.....	19 50	".....	36 88	Farmer.....	14 80	".....	45 50
".....	19 50	".....	36 88	Laborer.....	18 00	".....	39 00
Mason.....	10 40	Laborer.....	39 00	".....	18 00	".....	39 00
Farmer.....	14 80	".....	32 50	".....	11 70	".....	45 50
Railroader.....	10 40	".....	45 50	".....	18 00	Scabblor.....	52 00
Farmer.....	14 80	".....	39 00	".....	18 00	".....	52 00
Fireman.....	20 80	Quarryman.....	45 50	".....	11 70	".....	52 00
Farmer.....	14 80	".....	52 00	".....	18 00	".....	45 00
".....	15 00	Laborer.....	39 00	".....	14 80	Laborer.....	39 00
".....	14 80	".....	39 00	".....	11 70	".....	39 00
".....	14 80	".....	52 00	".....	11 70	".....	39 00
".....	14 80	".....	39 00				
".....	14 80	".....	39 00				
".....	14 80	".....	39 00				
				Average.....	\$10 24+	Average.....	\$45 99+

TABLE NO. 12.—Statement by Germans engaged in the Fire Clay, Slate, Coal, Grindstone, Gypsum, Stone and Copper Industries, showing occupation and wages received in Germany and occupation and present wages received in Michigan.

Occupation in Germany.	Wages per month received in Germany.	Present occupation in Michigan.	Wages per month in Michigan.	Occupation in Germany.	Wages per month received in Germany.	Present occupation in Michigan.	Wages per month in Michigan.
Sugar maker.....	\$24 00	Quarryman.....	\$39 00	Sailor.....	\$12 00	Laborer.....	\$48 00
Laborer.....	8 60	Laborer.....	32 50	Mason.....	20 00	Fireman.....	55 00
Teamster.....	6 00	".....	39 00	Farmer.....	3 00	Tramper.....	53 00
Agent.....	12 00	Quarryman.....	45 50	".....	11 00	Laborer.....	37 00
Butcher.....	2 00	Laborer.....	34 00	Laborer.....	7 00	".....	37 00
Laborer.....	10 40	".....	32 50	".....	10 00	".....	37 00
Farmer.....	7 80	".....	32 50	".....	10 00	".....	37 00
".....	7 80	".....	32 50	".....	10 00	".....	37 00
".....	7 80	".....	32 50	Farmer.....	3 33	Fireman.....	45 00
".....	7 80	".....	32 50	Stone mason.....	17 00	Stone mason.....	60 00
".....	15 08	Dock agent.....	39 00	Farmer.....	12 00	Tramper.....	53 00
Blacksmith.....	8 00	Blacksmith.....	52 00	".....	20 00	".....	53 00
Laborer.....	7 80	Laborer.....	45 50	Miner.....	20 00	Miner.....	60 00
Miner.....	18 00	Quarryman.....	45 50	Machinist.....	20 00	Machinist.....	65 00
Teaming.....	4 17	".....	52 00	Teamster.....	19 50	Head feeder.....	33 00
Farmer.....	6 50	".....	52 00	Miner.....	19 50	Spare hand.....	36 00
Carpenter.....	20 80	Laborer.....	45 50	Teamster.....	19 50	Switchman.....	40 00
Farmer.....	5 00	Quarryman.....	45 50	Miner.....	19 50	Head feeder.....	34 00
".....	5 00	".....	45 50	".....	19 50	".....	37 00
".....	5 00	".....	45 50	Farmer.....	3 12	Copper washer.....	34 00
".....	5 00	Laborer.....	40 00	Miner.....	19 50	Head feeder.....	36 00
".....	4 00	".....	32 50	Bookbinder.....	18 20	Laborer.....	34 00
".....	5 00	Timberman.....	42 90	Laborer.....	16 00	".....	40 00
".....	2 00	Quarryman.....	39 00	R. R. man.....	45 00	Shaftman.....	45 00
".....	5 00	Laborer.....	36 40	Cooper.....	12 00	Laborer.....	35 00
".....	4 00	".....	33 80	Laborer.....	14 00	Timberman.....	48 00
Laborer.....	13 00	Timberman.....	42 90	".....	15 00	Laborer.....	45 00
Farmer.....	4 00	Laborer.....	32 50	Blacksmith.....	20 00	Blacksmith.....	69 00
".....	10 00	".....	32 50	Farmer.....	15 00	" helper.....	45 00
".....	4 00	".....	32 50	Factory.....	11 00	Laborer.....	50 00
".....	6 00	".....	32 50	Farmer.....	3 00	".....	50 00
".....	6 00	".....	32 50	Machinist.....	20 00	Machinist.....	65 00
".....	3 00	".....	52 00	Miner.....	25 00	Engineer.....	47 00
Laborer.....	6 50	".....	45 50	Mason.....	18 00	Mason.....	70 00
Farmer.....	6 50	Teamster.....	45 50	Farmer.....	20 00	Runs steam ham'r.....	45 00
Butcher.....	8 00	Laborer.....	32 50	".....	20 00	Tramper.....	53 00
Farmer.....	12 48	".....	32 50	".....	20 00	".....	53 00
Stone cutter.....	14 60	".....	32 50	".....	20 00	".....	53 00
Farmer.....	3 04	".....	32 50	".....	11 00	Laborer.....	37 00
".....	6 00	".....	39 00	".....	8 00	".....	37 00
Miner.....	32 50	".....	46 80	".....	7 00	".....	37 00
Stone cutter.....	18 72	".....	52 00	Laborer.....	12 00	".....	37 00
Farmer.....	3 04	".....	32 50	".....	10 00	".....	40 00
Laborer.....	10 40	".....	32 50	Miner.....	10 00	Miner.....	50 00
".....	6 84	".....	32 50	".....	18 00	Tramper.....	53 00
Slate maker.....	19 50	".....	32 50	Farmer.....	9 00	Laborer.....	45 00
Farmer.....	2 92	".....	32 50	Machinist.....	20 00	Machinist.....	60 00
Miner.....	23 00	".....	39 00	Mason.....	30 00	Mason.....	70 00
Farmer.....	15 60	".....	32 50	".....	20 00	".....	70 00
".....	13 00	".....	39 00	Miner.....	15 00	Engineer.....	48 00
Carriage maker.....	26 00	".....	32 50	Painter.....	30 00	Painter.....	53 00
Blacksmith.....	20 00	".....	43 00	Farmer.....	10 00	Miner.....	55 00
Brewer.....	26 00	Spare hand.....	43 00	Teaming.....	26 00	Laborer.....	45 00
Cabinet maker.....	16 90	".....	43 00	Mason.....	20 00	Mason.....	65 00
Hospitalist.....	52 00	Head feeder.....	43 00	Laborer.....	10 00	Laborer.....	35 00
Farmer.....	5 00	Spare hand.....	45 00	Miner.....	18 00	Miner.....	45 00
Mason.....	20 00	Mason.....	60 00	Farmer.....	2 00	Surface.....	35 00
Miner.....	16 00	Miner.....	50 00	Carpenter.....	18 00	Carpenter.....	54 00
Mason.....	32 50	Mason.....	78 00	Machinist.....	20 00	Lander.....	54 00
Farmer.....	26 00	Smelting.....	46 80	Blacksmith.....	15 00	Blacksmith.....	65 00
Carpenter.....	32 50	Dipping copper.....	70 00	Mason.....	20 00	Mason.....	75 00
Farmer.....	9 10	Laborer.....	41 00	Average.....	\$18 81 +	Average.....	\$44 79 +
".....	9 10	".....	50 00				
Musician.....	8 00	Lander.....	54 00				
Miner.....	16 00	Miner.....	55 00				
Mechanic.....	18 00	Tramper.....	53 00				

TABLE NO. 13.—Statement by Canadians engaged in the Fire Clay, Slate, Coal, Grindstone, Gypsum, Stone and Copper Industries, showing occupation and wages received in Canada and occupation and present wages in Michigan.

Occupation in Canada.	Wages per month received in Canada.	Present occupation in Michigan.	Wages per month in Michigan.	Occupation in Canada.	Wages per month received in Canada.	Present occupation in Michigan.	Wages per month in Michigan.
Farmer	\$20 00	Laborer	\$20 00	Laborer	\$28 00	Laborer	\$28 00
"	13 00	Quarryman	39 00	Blacksmith	30 00	"	40 00
"	16 00	"	45 50	Farmer	33 50	Fireman	43 00
"	12 00	Laborer	32 50	"	13 00	Head feeder	33 00
"	18 00	Quarryman	45 50	"	20 00	Boss	40 00
"	19 50	"	45 50	"	13 00	Fireman	56 00
Storekeeper	12 00	"	39 00	Carpenter	26 00	Carpenter	58 00
Teamster	24 00	Rubber	52 00	Farmer	16 00	Engineer	50 00
Farmer	10 40	Laborer	32 50	"	18 00	R. R. boss	55 00
"	26 00	Teamster	40 04	Laborer	12 00	Machinist helper	40 00
Hack driver	12 00	Laborer	39 00	Carpenter	26 00	Carpenter	54 00
Blacksmith	53 00	Blacksmith	65 00	"	26 00	"	54 00
Farmer	14 00	Timberman	42 90	Farmer	18 00	Engineer	58 00
"	14 00	Laborer	32 50	"	12 00	Blacksmith	60 00
"	14 00	Quarryman	39 00	Teaming	50 00	Teamster	47 00
Blacksmith	39 00	Blacksmith	45 50	Farmer	15 00	Laborer	38 00
Farmer	15 00	Quarryman	45 50	Laborer	26 00	"	39 00
Mill hand	32 50	"	39 00	Farmer	12 00	"	60 00
Farmer	16 00	"	32 50	"	15 00	"	39 00
"	17 00	"	41 60	"	15 00	Teamster	47 00
"	8 00	Laborer	32 50	"	15 00	"	47 00
"	13 00	Quarryman	45 83	"	13 00	"	47 00
Laborer	26 00	Drillman	58 50	"	13 00	"	47 00
Engineer	35 10	Engineer	60 58	Blacksmith	40 00	Blacksmith	85 00
Laborer	26 00	Laborer	36 00	Laborer	28 00	Laborer	50 00
"	26 00	Miner	48 00	Carpenter	40 00	"	65 00
"	26 00	Fireman	56 00	Laborer	15 00	Carpenter	59 00
Clerk	15 00	Machinist	48 00	Carpenter	25 00	"	52 00
Laborer	13 00	Laborer	40 00	Farmer	15 00	Engineer	58 00
Farmer	12 00	"	40 00	Lumberman	26 00	Laborer	40 00
"	13 00	Carpenter	60 00	Teamster	25 00	"	40 00
Carpenter	50 00	"	60 00	Chopping	30 00	"	40 00
Farmer	15 00	Watchman	60 00	Farmer	26 00	"	40 00
Lumberman	15 00	Laborer	40 00	Fireman	26 00	"	47 00
Farmer	12 00	Surface man	40 00	Wood chopper	26 00	Fireman	40 00
"	15 00	"	40 00	Laborer	15 00	Laborer	40 00
"	12 00	"	40 00	Farmer	20 00	Brakeman	47 00
Laborer	35 00	Blacksmith helper	45 00	"	25 00	Machinist helper	40 00
Farmer	5 00	Carpenter	40 00	Laborer	26 00	"	40 00
Laborer	26 00	Fireman	40 00	Farmer	20 00	"	40 00
"	26 00	Dry man	35 00	Carpenter	40 00	Carpenter	52 00
Farmer	10 00	Teamster	45 00	Laborer	26 00	Laborer	50 00
Laborer	20 00	Slag breaker	40 00	Farmer	20 00	"	45 00
Brakeman	26 00	Carpenter	52 00	Lumberman	26 00	"	39 00
Farmer	5 00	Laborer	50 00	Miner	15 00	Miner	48 00
"	20 00	"	41 00	Laborer	26 00	Laborer	40 00
"	8 33	"	40 00	Blacksmith	13 00	Engineer	65 00
"	15 00	Watchman	60 00	Carpenter	40 00	Blacksmith helper	45 00
Clerk	35 00	Weighing coal	40 00	Laborer	30 00	Boss in stamp mill	50 00
Laborer	25 00	Carpenter	60 00	Miner	30 00	Mine	45 00
"	20 00	Laborer	40 00	"	15 00	"	45 00
"	26 00	"	40 00	Laborer	26 00	Laborer	40 00
"	20 00	"	42 00	Farmer	10 00	Blacksmith	50 00
Carpenter	10 00	"	41 00	Laborer	13 00	"	65 00
Engineer	50 00	Machinist	65 00	"	26 00	Teamster	47 00
Mason	41 60	Head feeder	48 00	"	26 00	Miner	55 00
Leather finisher	40 00	Laborer	40 00	Farmer	30 00	Stock man	40 00
Carpenter	26 00	Carpenter	58 00	Laborer	15 00	Fireman	42 00
Laborer	26 00	"	110 00				
Mason	20 00	Mason	60 00				
Laborer	26 00	Surface boss	60 00	Average	\$21 85+	Average	\$46 91+

TABLE NO. 14.—Statement by Irishmen engaged in the Fire Clay, Slate, Coal, Grindstone, Gypsum, Stone and Copper industries, showing occupation and wages received in Ireland and occupation and present wages in Michigan.

Occupation in Ireland.	Wages per month received in Ireland.	Present occupation in Michigan.	Wages per month in Michigan.	Occupation in Ireland.	Wages per month received in Ireland.	Present occupation in Michigan.	Wages per month in Michigan.
Farmer	\$11 00	Quarryman	\$45 50	Brakeman	\$20 00	Brakeman	\$57 00
Miner	39 00	"	45 50	Miner	15 00	Laborer	39 00
Farmer	6 50	Foreman	58 50	"	15 00	Miner	60 00
"	13 00	Quarryman	45 50	Farmer	15 00	"	55 00
Iron work	14 40	Foreman	52 00	Miner	20 00	Laborer	39 00
Farmer	7 80	Miner	32 50	Farmer	20 00	Miner	55 00
"	6 50	"	32 50	Carpenter	25 00	Carpenter	52 00
"	10 40	Laborer	32 50	Sailor	44 98	R. R. overseer ..	55 00
"	26 00	"	32 50	Miner	24 98	Head feeder	37 00
"	7 80	Miner	32 50	"	15 00	Miner	48 00
"	6 50	"	32 50	Blacksmith	12 00	Blacksmith	63 00
"	13 00	"	32 50	Miner	20 00	Miner	48 00
Gardener	10 40	Laborer	39 00	"	15 00	"	40 00
Farmer	16 90	Miner	36 83	"	15 00	Engineer	50 00
"	7 80	Miller	39 00	"	15 00	Laborer	40 00
Blacksmith	13 00	Blacksmith	39 00	Farmer	8 00	"	40 00
Farmer	6 50	Laborer	32 50	Miner	15 00	Carpenter	55 00
"	13 00	Foreman	52 00	Farmer	12 00	Miner	50 00
"	13 00	Miner	32 50	Laborer	11 00	Laborer	37 00
"	7 80	"	32 50	"	10 00	"	37 00
"	6 50	"	32 50	"	8 00	Miner	50 00
Engineer	30 00	Engineer	52 00	"	10 00	Laborer	40 00
Farmer	6 50	Laborer	39 00	"	12 50	Lander	40 00
Blacksmith	45 00	Blacksmith	52 00	Miner	14 00	Miner	50 00
Farmer	6 50	Quarryman	58 50	Laborer	12 50	"	48 00
"	8 00	"	39 00	Carpenter	20 00	Watchman	70 00
Laborer	13 00	"	45 83	Farmer	20 00	Laborer	45 00
Farmer	15 00	"	45 83	Miner	10 00	"	39 00
Quarryman	29 12	"	45 83	"	15 00	Miner	50 00
Farmer	5 00	"	37 50	"	25 00	"	48 00
Laborer	13 00	Laborer	33 33	Blacksmith	20 00	Blacksmith	80 00
Miner	26 00	"	32 50	"	30 00	"	65 00
Farmer	2 50	Lander	50 00	Miner	15 00	Machinist helper ..	40 00
Miner	30 00	Laborer	35 00	"	15 00	Miner	55 00
Laborer	15 50	Miner	55 00	"	20 00	"	48 00
Miner	15 00	"	55 00	"	25 00	"	48 00
"	15 00	"	48 00	Farmer	13 00	Laborer	62 00
"	15 00	"	47 00	Miner	10 00	Miner	55 00
Farmer	7 50	"	47 00	Farmer	13 00	"	48 00
Miner	15 00	Laborer	47 00	Miner	15 00	"	45 90
Laborer	10 00	"	35 00	"	25 00	Laborer	39 00
Farmer	4 17	Lander	38 00	"	25 00	"	39 00
Blacksmith	15 00	Blacksmith	55 00	"	15 00	Miner	55 00
Miner	20 00	Miner	50 00	"	15 00	"	50 00
Laborer	18 00	Laborer	33 00	"	15 00	"	60 00
Farmer	7 50	"	42 00	"	15 00	"	48 00
"	7 50	Engineer	47 00	"	20 00	"	48 00
Laborer	10 00	Head feeder	41 00	Farmer	12 50	Supply clerk	55 00
Smelting	39 00	Smelting	46 80	Miner	17 00	Miner	45 00
Farmer	9 10	Dipping copper ..	60 00	"	15 00	"	55 00
Miner	39 00	"	59 80	"	16 00	"	50 00
Farmer	7 80	Smelting	57 00	"	19 50	"	32 50
"	19 50	Miner	43 00	Farmer	13 00	Laborer	39 00
"	16 90	"	40 00	Blast furnace	28 00	"	39 00
Miner	15 00	Laborer	35 00				
Farmer	7 50	Miner	47 00	Average	\$15.86 +	Average	\$45.84 +

TABLE NO. 15.—Statement by Austrians engaged in the Fire Clay, Slate, Coal, Grindstone, Gypsum, Stone and Copper Industries, showing occupation and wages received in Austria and occupation and present wages in Michigan.

Occupation in Austria.	Wages per month received in Austria.	Present occupation in Michigan.	Wages per month in Michigan.	Occupation in Austria.	Wages per month received in Austria.	Present occupation in Michigan.	Wages per month in Michigan.
Weaver	\$13 00	Miner.....	\$32 50	Farmer	\$18 00	Miner.....	\$48 00
Farmer	8 83	Laborer.....	38 00	"	10 00	Timberman	48 00
"	8 83	Miner.....	53 00	"	18 00	Trammer.....	53 00
"	8 83	Trammer.....	53 00	"	18 00	"	58 00
"	8 83	"	53 00	"	18 00	"	58 00
"	8 83	"	53 00	"	15 00	"	58 00
"	8 83	"	53 00	"	18 00	"	53 00
"	8 83	"	53 00	"	18 00	"	42 00
"	1 67	"	53 00	"	18 00	"	58 00
"	1 67	"	53 00	"	18 00	"	58 00
"	1 67	"	53 00	"	12 00	"	53 00
"	1 67	"	53 00	"	13 00	"	53 00
"	10 00	Miner.....	50 00	"	10 00	"	58 00
"	5 00	Trammer.....	42 00	"	10 00	"	42 00
"	5 00	"	42 00	"	10 00	"	53 00
"	5 00	"	42 00	"	18 00	"	53 00
"	8 83	"	45 00	"	18 00	"	53 00
"	1 67	"	42 00	"	10 00	"	53 00
"	2 17	"	53 00	"	10 00	"	53 00
"	8 83	"	53 00	"	8 00	"	53 00
"	8 83	"	58 00	"	10 00	"	58 00
"	8 83	"	58 00	"	18 00	"	53 00
"	8 83	"	53 00	"	18 00	"	58 00
"	13 00	"	42 00	"	18 00	"	53 00
"	13 00	"	42 00	"	18 00	"	58 00
"	1 67	"	42 00	"	5 00	"	58 00
"	8 83	"	53 00	"	5 00	"	53 00
"	10 00	Lander.....	40 00	"	5 00	"	58 00
"	8 83	Mine laborer....	38 00	"	5 00	"	53 00
"	8 83	Trammer.....	52 00	"	10 00	Fireman.....	40 00
"	1 67	"	52 00	"	8 33	Mine laborer....	48 00
"	13 00	"	53 00	Locksmith.....	17 00	Trammer.....	40 00
"	8 83	Laborer.....	35 00	Farmer	2 00	Laborer.....	35 00
"	8 83	"	39 00	"	2 00	"	35 00
"	8 83	"	34 00	"	8 00	"	35 00
"	13 00	Timberman.....	48 00	"	2 00	"	35 00
"	13 00	Trammer.....	58 00	"	8 00	"	35 00
"	13 00	"	58 00	Laborer	2 00	"	35 00
"	13 00	"	53 00	"	2 00	"	35 00
"	13 00	"	53 00	Farmer	8 33	"	48 00
"	18 00	"	53 00	"	8 33	"	48 00
"	18 00	"	53 00	"	8 33	"	40 00
"	18 00	Laborer.....	39 00	"	8 33	"	48 00
"	18 00	Trammer.....	53 00	"	8 33	"	48 00
"	18 00	"	58 00	"	8 33	Trammer.....	58 00
"	18 00	"	53 00	"	8 33	"	53 00
"	18 00	"	53 00	"	8 33	"	58 00
"	18 00	"	53 00	"	8 33	"	53 00
"	18 00	"	47 00	"	8 33	"	58 00
"	18 00	"	53 00	"	8 33	"	53 00
"	18 00	Timberman	48 00	"	8 33	"	53 00
Miner.....	15 00	Miner.....	48 00	"	8 33	"	58 00
Laborer.....	12 00	Laborer.....	54 00	"	2 50	"	58 00
"	12 00	Trammer.....	40 00	"	8 33	Laborer.....	45 00
Trammer.....	12 00	"	40 00	"	8 33	Mine laborer ..	48 00
Farmer	18 00	Laborer.....	45 00	Average.....	\$7 90+	Average.....	\$48 50+
"	18 00	Miner.....	55 00				

TABLE NO. 16.—Statement by Polanders engaged in the Fire Clay, Slate, Coal, Grindstone, Gypsum, Stone and Copper Industries, showing occupation and wages received in Poland and occupation and present wages in Michigan.

Occupation in Poland.	Wages per month received in Poland.	Present occupation in Michigan.	Wages per month in Michigan.	Occupation in Poland.	Wages per month received in Poland.	Present occupation in Michigan.	Wages per month in Michigan.
Laborer.....	\$6 50	Quarryman.....	\$45 83	Teamster.....	\$15 60	On rock breaker..	\$30 00
Farmer.....	4 17	Laborer.....	32 50	Laborer.....	10 40	Crusherman.....	52 00
Laborer.....	1 67	Trammer.....	53 00	".....	20 80	Railroad man.....	39 00
Brewer.....	16 00	Miner.....	36 00	Farmer.....	1 67	Laborer.....	39 00
Laborer.....	5 00	Laborer.....	27 00	".....	2 17	".....	35 00
".....	1 91	Trammer.....	42 00	Carpenter.....	30 00	".....	40 00
".....	8 00	".....	50 00	Laborer.....	2 17	".....	48 00
".....	16 00	".....	56 00	Farmer.....	10 00	Trammer.....	53 00
Brewer.....	22 10	".....	54 00	".....	2 17	".....	42 00
Laborer.....	15 00	".....	52 00	".....	2 17	".....	42 00
Teamster.....	19 50	".....	52 00	".....	2 17	Lander.....	27 00
Laborer.....	19 50	".....	52 00	".....	2 17	Miner.....	47 00
".....	16 00	".....	50 00	Laborer.....	2 17	".....	47 00
".....	19 50	".....	45 00	Farmer.....	2 17	".....	47 00
".....	16 90	".....	48 00	Laborer.....	2 17	Trammer.....	42 00
".....	15 60	".....	50 00	Farmer.....	2 17	".....	42 00
Carpenter.....	39 00	".....	48 00	".....	2 17	".....	42 00
Laborer.....	18 20	".....	48 00	Butcher.....	8 00	Tram boss.....	48 00
Tanner.....	23 40	".....	48 00	Laborer.....	10 00	Lander.....	27 00
Laborer.....	18 00	".....	38 00	".....	11 70	Laborer.....	39 00
".....	5 00	".....	48 00	".....	13 00	".....	39 00
".....	15 60	".....	48 00	".....	15 60	".....	40 00
Herder.....	7 80	".....	50 00	".....	10 40	Trammer.....	54 00
Brewer.....	18 20	".....	45 00	".....	10 40	".....	52 00
Carpenter.....	26 00	Laborer.....	40 00	".....	13 00	".....	40 00
Gardener.....	6 00	".....	54 00	".....	15 60	".....	52 00
Laborer.....	7 80	".....	39 00	".....	13 00	".....	38 00
".....	18 00	".....	40 00	".....	10 40	".....	48 00
".....	13 00	".....	50 00	".....	7 00	".....	45 00
".....	10 00	".....	40 00	".....	11 70	".....	46 00
".....	13 00	".....	39 00	".....	7 80	".....	48 00
".....	10 40	".....	36 00	".....	8 00	".....	48 00
".....	10 40	".....	39 00	".....	11 70	".....	45 00
Butcher.....	23 40	".....	39 00	Carpenter.....	36 40	Carpenter.....	58 00
Laborer.....	26 00	Mine laborer...	54 00	".....	26 60	".....	52 00
".....	10 40	".....	47 00	".....	23 40	".....	50 00
".....	18 00	".....	52 00	Laborer.....	10 40	".....	31 20
".....	19 50	".....	47 00	Carpenter.....	31 20	Tram boss.....	70 00
Teamster.....	12 00	".....	56 00	Laborer.....	10 40	Rock house man..	45 00
Laborer.....	7 80	Timberman.....	48 00	".....	15 60	Timberman.....	48 00
".....	15 60	".....	52 00	Farmer.....	3 83	Miner.....	52 00
".....	19 50	".....	47 00	Sailor.....	25 00	".....	45 00
".....	13 00	".....	48 00	Farmer.....	1 67	Trammer.....	58 00
Farmer.....	13 00	".....	54 00	".....	1 67	".....	53 00
Herder.....	10 40	Miner.....	52 00	".....	1 67	".....	58 00
Laborer.....	10 40	".....	60 00	Miner.....	10 00	Rock boss.....	60 00
".....	18 20	Olfer.....	48 00	Farmer.....	4 00	Trammer.....	47 00
".....	6 00	".....	48 00	".....	2 17	".....	52 00
".....	15 60	Dryman.....	38 00				
Carpenter.....	36 00	Carpenter.....	50 00				
".....	39 00	Tram layer.....	35 00				
				Average.....	\$12 70 +	Average.....	\$45 83 +

TABLE NO. 17.—Statement by Swedes engaged in the Fire Clay, Slate, Coal, Grindstone, Gypsum, Stone and Copper industries, showing occupation and wages received in Sweden and occupation and present wages in Michigan.

Occupation in Sweden.	Wages per month received in Sweden.	Present occupation in Michigan.	Wages per month in Michigan.	Occupation in Sweden.	Wages per month received in Sweden.	Present occupation in Michigan.	Wages per month in Michigan.
Laborer.....	\$10 40	Miner.....	\$32 50	Farmer.....	\$3 83	Mine laborer ..	\$38 00
Molder.....	28 00	".....	32 50	Carpenter.....	10 40	Carpenter.....	45 00
Laborer.....	16 90	Teamster.....	39 00	Laborer.....	20 00	Miner.....	55 00
Clerk.....	18 00	".....	39 00	Farmer.....	18 00	".....	55 00
Teamster.....	16 90	".....	39 00	Mason.....	17 00	Engineer.....	85 00
Gardener.....	15 60	".....	39 00	Miner.....	10 00	Miner.....	53 00
Brickmaker.....	9 88	Laborer.....	39 00	".....	10 00	".....	48 00
Farmer.....	10 40	".....	45 50	".....	8 00	".....	48 00
".....	14 30	".....	45 50	".....	15 00	".....	48 00
Railroader.....	28 40	Quarryman.....	88 00	Carpenter.....	20 00	".....	48 00
".....	15 60	".....	45 50	Farmer.....	10 00	Laborer.....	45 00
Miner.....	19 50	".....	45 50	Machinist.....	35 00	Machinist.....	55 00
Farmer.....	18 00	".....	45 50	Farmer.....	15 00	Laborer.....	40 00
Butcher.....	8 00	".....	45 50	Miner.....	8 00	Miner.....	45 00
Blacksmith.....	16 60	Blacksmith.....	58 50	".....	11 00	".....	50 00
".....	8 50	".....	45 50	Carpenter.....	17 00	Carpenter.....	55 00
Farmer.....	2 09	Foreman.....	52 00	Farmer.....	5 00	Miner.....	46 00
Blacksmith.....	28 00	Molder.....	39 00	Engineer.....	8 00	Engineer.....	100 00
Engineer.....	18 00	Engineer.....	52 00	Miner.....	12 00	Miner.....	45 00
Laborer.....	19 50	Laborer.....	52 00	".....	11 00	".....	50 00
".....	9 10	".....	39 00	Plasterer.....	20 00	Mine plasterer ..	50 00
Sailor.....	20 00	Scabbler.....	52 00	Miner.....	15 50	Laborer.....	40 00
Laborer.....	19 50	".....	52 00	Laborer.....	7 28	".....	45 00
".....	19 50	".....	52 00	".....	16 00	Miner.....	48 00
".....	28 00	".....	52 00	".....	16 00	Lander.....	54 00
".....	15 60	".....	52 00	".....	21 00	Laborer.....	39 00
R. R. Agent.....	40 00	Blacksmith.....	70 00	Miner.....	15 00	Miner.....	50 00
Farming.....	16 66	Mine laborer.....	48 00	Peddler.....	3 83	Trammer.....	53 00
".....	16 66	".....	48 00	Miner.....	18 00	Miner.....	50 00
".....	16 66	".....	48 00	".....	16 66	".....	55 00
".....	16 66	".....	48 00	".....	14 00	".....	50 00
Blacksmith.....	12 00	Laborer.....	45 00	".....	20 00	".....	40 00
Farmer.....	16 66	Trammer.....	53 00	Farmer.....	3 83	".....	48 00
Laborer.....	13 00	".....	53 00	Blacksmith.....	28 00	Blacksmith.....	45 50
Miner.....	28 00	".....	53 00	".....	28 00	".....	78 00
Farmer.....	16 66	".....	53 00	".....	28 00	Laborer.....	52 00
".....	16 66	".....	53 00	R. R. man.....	28 00	".....	52 00
Mason.....	30 00	Mason.....	65 00	Farmer.....	28 00	".....	39 00
Fishing.....	5 00	Mine laborer.....	48 00				
Farmer.....	5 00	Washing copper.....	51 00				
Carpenter.....	20 00	Head feeder.....	43 00				
				Average.....	\$15 95+	Average.....	\$49 20+

TABLE NO. 18.—Statement by Norwegians engaged in the Fire Clay, Slate, Coal, Grindstone, Gypsum, Stone and Copper industries, showing occupation and wages received in Norway and occupation and present wages in Michigan.

Occupation in Norway.	Wages per month received in Norway.	Present occupation in Michigan.	Wages per month in Michigan.	Occupation in Norway.	Wages per month received in Norway.	Present occupation in Michigan.	Wages per month in Michigan.
Sailor.....	\$32 50	Laborer.....	\$45 50	Miner.....	\$18 00	Miner.....	\$50 00
Laborer.....	26 00	Drillman.....	52 00	".....	18 00	".....	50 00
Farmer.....	7 00	Quarryman.....	45 50	Laborer.....	11 00	".....	50 00
Sawmill man.....	26 00	".....	45 50	Miner.....	15 00	Dry man.....	40 00
".....	26 00	Foreman.....	75 00	Laborer.....	16 00	Miner.....	55 00
Carpenter.....	12 50	Carpenter.....	52 00	".....	16 00	Timberman helper	48 00
Miner.....	30 00	Miner.....	55 00	Miner.....	12 00	Laborer.....	45 00
".....	30 00	Laborer.....	40 00	".....	11 00	Miner.....	50 00
Fishing.....	12 00	Miner.....	45 00	Laborer.....	8 00	".....	45 00
Miner.....	8 00	".....	50 00	Miner.....	12 00	".....	45 00
".....	16 00	".....	50 00	".....	12 00	".....	45 00
".....	26 00	Blaster.....	55 00	".....	15 00	".....	55 00
Sailor.....	12 50	Miner.....	55 00	Sailor.....	16 00	".....	55 00
Fishing.....	12 00	Trammer.....	42 00	Laborer.....	16 00	".....	48 00
Carpenter.....	30 00	Tram boss.....	52 00	Painter.....	20 00	Painter.....	65 00
Fireman.....	30 00	Engineer.....	50 00	Miner.....	20 00	Miner.....	48 00
Farmer.....	3 33	Laborer.....	38 00	".....	20 00	".....	50 00
Postman.....	14 00	".....	38 00	".....	20 00	".....	50 00
Blacksmith.....	12 00	Blacksmith.....	70 00	".....	18 00	".....	50 00
Painter.....	30 00	Painter.....	52 00	".....	16 00	".....	50 00
Miner.....	50 00	Miner.....	50 00	".....	16 00	".....	50 00
".....	10 00	Laborer.....	39 00	Laborer.....	10 00	Laborer.....	40 00
Stamp mill.....	19 50	Bookkeeper.....	60 00	Miner.....	8 00	".....	39 00
Pilot.....	20 00	Laborer.....	36 00	".....	16 00	".....	25 00
Miner.....	28 00	Miner.....	52 00	".....	10 00	Miner.....	55 00
".....	26 00	".....	48 00	Laborer.....	16 00	Laborer.....	39 00
".....	25 00	".....	45 50	Miner.....	16 00	Miner.....	48 00
".....	30 00	".....	50 00	".....	16 00	".....	48 00
".....	25 00	".....	50 00	".....	8 00	".....	48 00
".....	25 00	".....	50 00				
".....	25 00	".....	50 00				
".....	18 00	".....	50 00				
".....	25 00	".....	36 00	Average.....	\$18 38+	Average.....	\$48 38+

TABLE NO. 19.—Statement by Hollanders engaged in the Fire Clay, Slate, Coal, Grindstone, Gypsum, Stone and Copper industries, showing occupation and wages received in Holland and occupation and present wages in Michigan.

Occupation in Holland.	Wages per month received in Holland.	Present occupation in Michigan.	Wages per month in Michigan.	Occupation in Holland.	Wages per month received in Holland.	Present occupation in Michigan.	Wages per month in Michigan.
Laborer.....	\$10 00	Quarryman.....	\$32 50	Farmer.....	\$10 40	Miner.....	\$32 50
".....	10 00	".....	32 50	".....	13 00	".....	32 50
Farmer.....	15 60	Driller.....	32 50	".....	10 40	Laborer.....	32 50
Laborer.....	15 60	Miller.....	39 00	".....	10 40	".....	32 50
Farmer.....	19 50	Mill man.....	32 50	".....	18 00	".....	32 50
Laborer.....	26 00	Stucco boiler...	45 50	".....	7 80	".....	32 50
".....	13 00	".....	45 50	".....	10 40	".....	32 50
Farmer.....	8 50	Teamster.....	32 50	Dyke worker...	19 50	".....	32 50
".....	15 60	Miner.....	32 50	Farmer.....	10 40	".....	32 50
".....	15 60	".....	32 50	".....	13 00	".....	32 50
Laborer.....	10 40	".....	32 50	".....	10 40	".....	32 50
Farmer.....	13 00	Laborer.....	32 50	".....	10 40	".....	32 50
".....	15 60	".....	32 50	".....	13 00	".....	32 50
".....	10 40	".....	32 50	".....	10 40	".....	32 50
".....	13 00	".....	32 50	".....	19 50	".....	32 50
".....	15 60	".....	32 50	".....	18 00	".....	32 50
".....	13 00	".....	32 50	Blacksmith.....	26 00	Blacksmith.....	39 00
".....	13 00	".....	32 50	Farmer.....	13 00	Teamster.....	32 50
".....	10 40	".....	32 50	".....	19 50	".....	32 50
".....	19 50	".....	32 50	".....	14 80	Laborer.....	44 98
Laborer.....	19 50	".....	32 50	".....	8 00	Quarryman.....	32 50
Blacksmith.....	26 00	Blacksmith.....	39 00	".....	11 00	".....	32 50
Farmer.....	10 40	Fireman.....	32 50	".....	10 00	".....	32 50
".....	26 00	Stucco boiler...	39 00	".....	10 00	".....	32 50
Laborer.....	26 00	Laborer.....	32 50	".....	5 00	".....	32 50
Farmer.....	10 40	Miner.....	32 50	Average.....	\$13 88+	Average.....	\$33 74
".....	10 40	".....	32 50				

TABLE NO. 20.—Statement by Prussians engaged in the Fire Clay, Slate, Coal, Grindstone, Gypsum, Stone and Copper Industries, showing occupation and wages received in Prussia and occupation and present wages in Michigan.

Occupation in Prussia.	Wages per month received in Prussia.	Present occupation in Michigan.	Wages per month in Michigan.	Occupation in Prussia.	Wages per month received in Prussia.	Present occupation in Michigan.	Wages per month in Michigan.
Laborer.....	\$7 80	Laborer.....	\$22 50	Blacksmith.....	\$19 50	Blacksmith.....	\$30 00
".....	7 80	".....	22 50	Farmer.....	9 10	Laborer.....	22 50
Farmer.....	6 50	Miner.....	22 50	".....	7 80	Miner.....	22 50
Laborer.....	7 80	".....	22 50	".....	6 50	".....	22 50
Farmer.....	6 50	".....	22 50	".....	7 80	".....	25 88
Laborer.....	7 80	".....	22 50	".....	7 80	".....	25 88
".....	13 00	Fireman.....	22 50	Laborer.....	6 50	".....	22 50
Farmer.....	13 00	Laborer.....	22 50	Farmer.....	6 50	".....	22 50
".....	13 00	".....	22 50	".....	6 50	".....	22 50
Laborer.....	13 00	".....	22 50	".....	9 10	".....	22 50
Teamster.....	13 00	".....	22 50	Teamster.....	7 80	".....	22 50
Farmer.....	13 00	Miner.....	25 88	Farmer.....	7 80	".....	22 50
Laborer.....	13 00	".....	22 50	".....	7 80	".....	22 50
Farmer.....	13 00	".....	22 50	".....	6 50	".....	22 50
Carpenter.....	6 50	".....	22 50	".....	7 80	".....	22 50
Laborer.....	6 50	".....	22 50	".....	6 50	".....	22 50
Farmer.....	9 88	".....	22 50	".....	7 80	".....	22 50
Teamster.....	6 50	".....	22 50				
Farmer.....	7 80	Laborer.....	22 50				
".....	10 40	Miller.....	22 50				
				Average.....	\$9 05+	Average.....	\$22 94+

TABLE NO. 21.—Statement by Scotchmen engaged in the Fire Clay, Slate, Coal, Grindstone, Gypsum, Stone and Copper industries, showing occupation and wages received in Scotland and occupation and present wages in Michigan.

Occupation in Scotland.	Wages per month received in Scotland.	Present occupation in Michigan.	Wages per month in Michigan.	Occupation in Scotland.	Wages per month received in Scotland.	Present occupation in Michigan.	Wages per month in Michigan.
Malster.....	\$22 63	Turner.....	\$52 00	Miner.....	\$15 00	Watchman....	\$53 00
Turner.....	18 00	Quarryman....	45 50	Machinist.....	25 00	Machinist.....	80 00
Laborer.....	26 00	".....	45 50	Shoemaker.....	15 00	" helper.....	40 00
Carpenter.....	15 60	Carpenter.....	45 50	Farmer.....	16 00	Brakeman.....	50 00
Quarryman....	30 00	Quarryman....	45 50	Laborer.....	26 00	Engineer.....	47 00
".....	30 60	".....	45 50	Miner.....	20 00	Mine capt.....	500 00
Clerk.....	18 00	".....	42 80	".....	20 00	Surface boss..	100 00
Farmer.....	6 00	Teamster.....	37 70	Laborer.....	20 00	Watchman....	50 00
Shepherd.....	1 67	Laborer.....	40 00	Miner.....	23 00	Miner.....	50 00
Farmer.....	15 00	".....	47 00	".....	19 50	".....	33 50
Laborer.....	20 00	Engineer.....	50 00	".....	19 50	".....	33 50
Machinist.....	15 00	Machinist.....	80 00	".....	28 00	".....	38 00
Miner.....	15 00	Mine capt.....	100 00	".....	32 50	".....	38 00
Foundryman...	20 00	Timberman....	48 00	".....	28 00	".....	45 50
Cooper.....	21 58	Cooper.....	42 00	".....	26 00	".....	39 00
Laborer.....	26 00	Laborer.....	45 00	".....	32 50	".....	39 00
Sawyer.....	20 00	Brakeman.....	44 00	".....	19 50	".....	28 00
Miner.....	15 00	Watchman.....	53 00	".....	39 00	".....	39 00
Laborer.....	26 00	Laborer.....	45 00	Average.....	\$20 92+	Average.....	\$59 96+
Sawyer.....	20 00	Brakeman.....	44 00				

TABLE NO. 22.—Statement by Italians engaged in the Fire Clay, Slate, Coal, Grindstone, Gypsum, Stone and Copper Industries, showing occupation and wages received in Italy and occupation and present wages in Michigan.

Occupation in Italy.	Wages per month rec'd in Italy.	Present occupation in Michigan.	Wages per month in Michigan.	Occupation in Italy.	Wages per month rec'd in Italy.	Present occupation in Michigan.	Wages per month in Michigan.
Farmer.....	\$3 33	Laborer.....	\$48 00	Farmer.....	\$3 33	Timberman helper	\$48 00
".....	3 33	Trammer.....	53 00	".....	3 33	Trammer.....	53 00
".....	3 33	Fireman.....	58 00	".....	3 33	".....	53 00
Laborer.....	12 00	Miner.....	50 00	".....	3 33	".....	53 00
".....	12 00	Timberman....	60 00	".....	3 33	".....	53 00
Farmer.....	3 33	Timberman helper.	48 00	".....	3 33	".....	53 00
Laborer.....	12 00	Fireman.....	48 00	Boatman.....	12 00	".....	53 00
".....	12 00	".....	48 00	Farmer.....	3 33	Timberman helper	48 00
Farmer.....	3 33	Lander.....	54 00	Miner.....	12 00	Fireman.....	42 00
".....	3 33	".....	54 00	Laborer.....	10 40	Laborer.....	39 00
".....	3 33	Laborer.....	40 00	".....	10 40	".....	39 00
".....	3 33	Trammer.....	53 00	".....	7 80	".....	39 00
".....	3 33	".....	53 00	Average.....	\$6 43+	Average.....	\$50 11+
".....	3 33	Trammer boss..	65 00				

TABLE NO. 23.—Statement by Welshmen engaged in the Fire Clay, Slate, Coal, Grindstone, Gypsum, Stone and Copper Industries, showing occupation and wages received in Wales and occupation and present wages in Michigan.

Occupation in Wales.	Wages per month received in Wales.	Present occupation in Michigan.	Wages per month in Michigan.	Occupation in Wales.	Wages per month received in Wales.	Present occupation in Michigan.	Wages per month in Michigan.
Miner	\$19 50	Miner	\$39 00	Slate maker	\$19 50	Slate maker....	\$52 00
"	32 50	"	45 50	"	28 00	"	52 00
"	32 50	"	45 50	"	32 50	"	52 00
"	30 00	"	32 50	"	26 00	"	52 00
"	24 00	"	39 00	Quarryman.....	26 00	Quarryman....	52 00
"	28 00	"	45 50				
"	32 50	"	45 50				
"	32 50	"	45 50	Average	\$27 65+	Average	\$46 00+

TABLE NO. 24.—Statement by Swiss engtaged in the Fire Clay, Slate, Coal, Grindstone, Gypsum, Stone and Copper industries, showing occupation and wages received in Switzerland and occupation and present wages in Michigan.

Occupation in Switzerland.	Wages per month received in Switzerland.	Present occupation in Michigan.	Wages per month in Michigan.
Miner.....	\$13 00	Head feeder.....	\$38 00
Railroad man.....	15 00	Fireman.....	47 00
Lapidist.....	12 00	Laborer.....	40 00
Carpenter.....	15 00	Carpenter.....	60 00
Farmer.....	15 00	Laborer.....	45 00
Average.....	\$14 00	Average.....	\$45 60

PART X.

PROCEEDINGS AT THE SIXTH ANNUAL SESSION OF THE
NATIONAL CONVENTION

OF

CHIEFS AND COMMISSIONERS

OF THE VARIOUS

BUREAUS OF STATISTICS OF LABOR

IN THE

UNITED STATES

HELD AT INDIANAPOLIS, INDIANA, MAY 22 AND 23,

1888.

PROCEEDINGS.

The sixth annual convention of Chiefs and Commissioners of the several Bureaus of Labor Statistics in the United States met in the office of the Chief of the Bureau of Statistics of Indiana, in the State Capitol building, Indianapolis, at 11 o'clock, on the morning of May 22, 1888.

In the absence of the President, Mr. Carroll D. Wright, the Vice President, Mr. Frank A. Flower, of Wisconsin, called the meeting to order, and said that the regret at the absence of Mr. Wright was shared by all. He was a man so valuable in council, and so genial and affable, that it is a great loss to be without him. He thought that the importance of the work in which they were engaged was growing, and that the public was becoming aware of its usefulness. He congratulated the members on the honesty and impartiality with which statistical work had been done. Students of statistics wanted to be able to show why wages were lower in one State than in another, and to be able to give facts and figures relative to production, so that economists and thoughtful men could form correct judgments in all matters where the interests of labor and capital are at stake.

The Secretary, Mr. Hutchins, read the following letters:

DEPARTMENT OF THE INTERIOR, BUREAU OF LABOR, }
Washington, D. C., May 28, 1888.

Col. E. R. Hutchins, Secretary of Convention of Chiefs and Commissioners of Bureaus of Labor, Indianapolis, Ind.:

MY DEAR SIR,—I find it absolutely impossible for me to attend the Convention to be held at Indianapolis. I regret this exceedingly, as matters of interest and importance will come before the Convention, and I was in hopes not only to be able to participate in their discussion, but to learn something of the experience of the various offices.

I desired to call the attention of the Convention to two matters, and this I trust you will do for me. The first relates to the collection of information concerning mortgages and other debts of record. General Heath, of Michigan, has done a most excellent piece of work in this direction, and Colonel Lord, of Illinois, is, as I understand it, upon a similar investigation. The statistics of indebtedness are being called for on every hand. Their importance need not be dwelt upon, for we all recognize the necessity, even of

the facts in this connection. I hope, therefore, the Convention will discuss most thoroughly the feasibility of collecting such information, and learn by an exchange of views the obstacles and difficulties in the way of carrying out such investigations. General Heath and Colonel Lord ought to be able to give the members of our body some valuable assistance.

The second point I desired to suggest for discussion was a memorandum submitted by Mr. Atkinson, inclosed herewith. It is a pretty comprehensive lay-out for a line of facts which we ought to gather. In this connection I desire to say that the United States Bureau of Labor will, as soon as possible, undertake the collection of facts on three points: First, as to the cost of production; second, on the efficiency of labor; and, third, the distribution of the products of labor; that is, the proportion of the products secured by capital and labor respectively. This line has long been in contemplation, but as yet this Bureau has not had the proper equipment for the collection of the information. I am in hopes it will have before long. The work suggested by Mr. Atkinson is in line of what has already been discussed, although he has in a more complete way classified the desired information. I hope his suggestions will be thoroughly and exhaustively discussed, and, if it is possible, that the Convention take some action relative to the uniform and contemporaneous collection of some, if not all, the information outlined by him. You will find that his suggestions will offer the basis for interesting and profitable discussion.

With the hope that the Convention will have a profitable and pleasant experience at Indianapolis, and with the best wishes for the pleasure of each and every member of the body, I am,

Sincerely yours,

CARROLL D. WRIGHT, *Commissioner.*

STATE OF ILLINOIS, BUREAU OF LABOR STATISTICS, }
OFFICE OF THE SECRETARY, }
Springfield, March 26, 1888. }

Mr. E. R. Hutchins, Secretary, etc., Des Moines, Iowa:

MY DEAR MR. HUTCHINS,—I regret to say that I shall not be able to attend the next convention at Indianapolis. Considerations which seem to me, at this time, of paramount importance, compel me to this disappointing conclusion, which I regret the more in view of your flattering request to prepare a paper for that occasion.

I am most truly yours,

J. S. LORD.

COMMONWEALTH OF MASSACHUSETTS, }
BUREAU OF STATISTICS OF LABOR, }
Chaflin Building, 20 Beacon Street, Boston, May 9, 1888. }

Col. E. R. Hutchins, Des Moines, Iowa:

DEAR SIR,—Your kind invitation to the Sixth National Convention of Chiefs and Commissioners duly at hand. The census work is not yet completed, and the demands upon my time at the office are so great that it would be impossible for me to be with you on the 22d. I should like very much to do so, never having been able to be present at a Convention. I will give the promise, however, in advance, that if I am connected with the official statistical work in 1889 I shall be at the Convention, and shall un-

doubtedly wish to say something on my hobby, "application of machinery to statistical tabulation."

Trusting that you will have a very pleasant and instructive time, I am,

Yours very truly,

CHAS. F. PIDGIN, *Chief Clerk.*

ST. PAUL, MINN., *May 22, 1888.*

Jno. Lamb, Indianapolis, Ind.:

DEAR SIR,—I am very sorry that I have been prevented from completing my paper for the Convention of Labor Statistics. I never before so much desired to take advantage of an opportunity to express my thoughts on any subject as on this occasion on the subject I was to write on.

As you are aware, at the time I had an opportunity to prepare it, I could not collect my thoughts owing to a physical and mental strain that was thrown upon me in various ways, and for the past week I could not spare the time.

Hoping that the Convention will result in much good for the various bureaus, I remain truly,

JNO. F. CRONIN.

THE UNIVERSITY OF MINNESOTA, }
Minneapolis, *May 18, 1888.* }

My Dear Mr. Hutchins,—The programme of the meeting at Indianapolis, which you were so good as to send me, came some days ago. If my work and the health of my family would permit, I should not fail to indulge myself in the pleasure of attending.

I take the liberty to hand you a short paper on a matter which has been on my mind a long time. It seems to me to be one which must before long become the subject of public discussion and of legislation. It seems to me that the people will be forced, in some such way as this memorandum proposes, to protect themselves against the smart men who know, hold and wield the apparatus of authentic intelligence.

If, in your judgment, the matter is of sufficient moment to deserve the attention of the Convention, you are at liberty to use it. It would give me great pleasure to meet the good friends I made at Madison. Whenever it may be the turn of Minneapolis to have the Convention you may depend on a rousing welcome.

Very truly and respectfully yours, etc.,

WILLIAM W. FOLWELL.

The Secretary reported the following states as now having Bureaus of Labor Statistics, with the names of officers in charge, together with their post-office address:

BUREAU OF LABOR, WASHINGTON, D. C. :

Established January 18, 1885. Carroll D. Wright, Commissioner, Washington, D. C.

BUREAU OF STATISTICS OF LABOR, OF MASSACHUSETTS:

Established June, 1869. Carroll D. Wright, Chief, Boston, Mass.

BUREAU OF INDUSTRIAL STATISTICS, OF PENNSYLVANIA :

Established 1872. Prof. Albert S. Bolles, Chief, Harrisburg, Penn.

BUREAU OF LABOR STATISTICS AND INSPECTION, OF MISSOURI :

Established 1876. Enlarged 1888. Oscar Kochtitzky, Commissioner, Jefferson City, Mo.

BUREAU OF LABOR STATISTICS, OF OHIO :

Established 1877. A. D. Fassett, Commissioner, Columbus, Ohio.

BUREAU OF STATISTICS OF LABOR AND INDUSTRIES, OF NEW JERSEY :

Established March, 1878. James Bishop, Chief, Trenton, N. J.

BUREAU OF LABOR STATISTICS, OF ILLINOIS :

Established 1879. John S. Lord, Secretary, Springfield, Ill.

BUREAU OF STATISTICS, OF INDIANA :

Wm. A. Peelle, Jr., Chief, Indianapolis, Ind.

BUREAU OF LABOR STATISTICS, OF NEW YORK :

Established 1883. Charles F. Peck, Commissioner, Albany, N. Y.

BUREAU OF LABOR STATISTICS, OF CALIFORNIA :

Established 1883. J. J. Tobin, Commissioner, San Francisco, Cal.

BUREAU OF LABOR AND INDUSTRIAL STATISTICS, OF MICHIGAN :

Established March, 1883. Alfred H. Heath, Commissioner, Lansing, Mich.

BUREAU OF LABOR STATISTICS, OF WISCONSIN :

Established April, 1883. Frank A. Flower, Commissioner, Madison, Wis.

BUREAU OF LABOR STATISTICS, OF IOWA :

Established March, 1884. E. R. Hutchins, Commissioner, Des Moines, Iowa.

BUREAU OF STATISTICS OF LABOR, OF MARYLAND :

Established 1884. Thomas C. Weeks, Chief, Baltimore, Md.

BUREAU OF LABOR STATISTICS, OF KANSAS :

Established May, 1885. Frank H. Betton, Commissioner, Topeka, Kansas.

BUREAU OF LABOR STATISTICS, OF CONNECTICUT :

Established April, 1885. Samuel M. Hotchkiss, Commissioner, Hartford, Conn.

BUREAU OF LABOR STATISTICS, OF MAINE :

Established March, 1867. Samuel W. Matthews, Commissioner, Augusta, Maine.

BUREAU OF LABOR STATISTICS, OF MINNESOTA :

Established March, 1887. John Lamb, Commissioner, St. Paul, Minn.

BUREAU OF LABOR STATISTICS, OF COLORADO :

Established March, 1887. Secretary of State, *ex officio* Commissioner ; C. J. Driscoll, Deputy Commissioner, Denver, Col.

BUREAU OF LABOR STATISTICS, OF NORTH CAROLINA :

Established March, 1887. W. N. Jones, Commissioner, Raleigh, N. C.

BUREAU OF LABOR STATISTICS, OF RHODE ISLAND :

Established April, 1887. J. B. Bowditch, Commissioner, Providence, R. I.

BUREAU OF LABOR AND INDUSTRIAL STATISTICS, OF NEBRASKA :

Established 1887. John Jenkins, Commissioner, Lincoln, Neb.

Upon calling the roll the following were found to be present : A. D. Fassett, Commissioner of the Ohio Bureau ; James Bishop, chief of the New Jersey Bureau ; Charles E. Barnes, Deputy Commissioner of the Michigan Bureau ; Wm. A. Peelle, Jr., Commissioner of the Indiana Bureau ; Frank A. Flower, Commissioner of Wisconsin Bureau ; M. J. Simpelaar, Deputy of the Wisconsin

Bureau; Henry Claymier, Factory Inspector of the Wisconsin Bureau; James C. Moore, Assistant Factory Inspector of the Wisconsin Bureau; E. R. Hutchins, Commissioner of the Iowa Bureau; Samuel M. Hotchkiss, Commissioner of the Connecticut Bureau; Frank H. Betton, Commissioner of the Kansas Bureau; Samuel W. Matthews, Commissioner of the Maine Bureau; John Lamb, Commissioner of the Minnesota Bureau; C. J. Driscoll, Deputy Commissioner of the Colorado Bureau; J. B. Bowditch, Commissioner of the Rhode Island Bureau; Geo. D. Gessaman, Chief Clerk of the Ohio Bureau; David T. Praig, Deputy Commissioner of the Indiana Bureau.

On motion of Mr. J. W. Bishop, the Convention proceeded to the election of officers.

The following gentlemen were unanimously elected by acclamation:

President—Mr. Carroll D. Wright, of Massachusetts.

Vice President—Mr. Frank A. Flower, of Wisconsin.

Secretary and Treasurer—Mr. E. R. Hutchins, of Iowa.

On motion of Mr. Betton, the selection of the place for holding the next Convention was postponed until the afternoon session.

On motion of Mr. Hutchins, the proposed visit to the tile works and other places of interest, was fixed for to-morrow morning at 8 o'clock, with the understanding that there should be a session for business this evening in addition to the afternoon session..

On motion of Mr. Matthews, the Secretary was directed to send a telegram to Mr. Carroll D. Wright, expressing the regret of the Convention at his absence, and notifying him of his election as President of the Convention.

Adjourned until 2 o'clock this afternoon.

AFTERNOON SESSION.

The Convention met at 2 o'clock. The selection of the place for holding the next meeting was taken up, and Mr. Driscoll named Denver, Mr. Hotchkiss named Hartford and Mr. Bishop named Trenton. Four ballots were had without choice. On the fifth ballot Denver was selected.

The Secretary reported that he had telegraphed Mr. Wright in obedience to the wishes of the Convention.

The letter of Mr. Wright was re-read, and the first suggestion made therein discussed.

Mr. Fassett, of Ohio, said he was now engaged in the work suggested by Mr. Wright, and had been for three months. He was securing data as to the amount of mortgage indebtedness on real estate, the rate of interest and assessed valuation. Of course some mortgages are paid and not canceled,

and also partial payments are made in many cases, but we think the work of very great value, and hope other States will take it up.

Mr. Bolles, of Pennsylvania, said no one would question the value of such data, but thought the next census taking would necessarily cover all this ground as well as that of judgments, penalties, etc. He thought it could be better done in that way than by Bureaus of Labor Statistics.

Mr. Hutchins, of Iowa, opposed the Bureaus taking up this line of work, from the fact that he did not believe it would be of any real value. If a man originally places a \$10,000 mortgage on his property, and has made payments on the same to the extent of \$8,000, the records do not show such credits, but make the indebtedness \$8,000 greater than it really is. This is repeated all over the State in almost innumerable instances, and the result is that while a mass of figures may be collected, yet the truth is not reached, and, therefore, the results are comparatively valueless.

Mr. Simpelaar, of Wisconsin, thought it would be unfortunate if the Bureaus should take up work like this, which did not seem to be in harmony with the objects of these offices.

Mr. Bowditch, of Rhode Island, supposed the purpose was to find out the burden of indebtedness upon the people, and if it was impossible to get at this accurately, the result would be valueless, except that it might show the number of farms without mortgages.

Mr. Barnes, of Michigan, agreed with what had been said as to accuracy. If the figures were not accurate they were valueless. Michigan had good success in the work because the law made it the duty of the Supervisors to coöperate, and they were paid for their work. From fifty-eight per cent. of the farms of Michigan the Bureau had obtained good returns. In these cases present actual indebtedness was sought. Reports only of those farmers who willingly gave testimony were published. He thought the United States government could do the work more thoroughly than State Bureaus.

Mr. Betton, of Kansas, said such work would be impossible in his State. Kansas had an excellent Agricultural Board, and he thought if such work was deemed advisable that Board should do it.

Mr. Driscoll, of Colorado, thought the census takers should do it, and opposed the Bureaus taking it up and thus producing an array of misleading figures.

No action was deemed best upon the subject.

On motion of Mr. Fassett, the second suggestion of Mr. Wright, relative to the ideas contained in the paper of Edward Atkinson, Esq., of Boston (which paper accompanied Mr. Wright's letter, and which will be found below), was referred to a committee of three.

Mr. Flower, as President, appointed Messrs. Fassett, Bolles and Bishop as such committee.

The Secretary read the following

PAPER BY EDWARD ATKINSON, ESQ.

It is assumed in this memorandum that the Chiefs of the several Bureaus of Labor Statistics will concur with the writer in the view that if the complete history can be obtained of important establishments covering a long term of years and giving the rates of wages in each specific department of the work, the cost of labor and the price of any given article which has been made continuously of the same quality, such data of wages and prices will constitute a better standard of the changes which have occurred than the ordinary averages in which it is attempted to cover a very wide field and to include in the same category either various employments, or the same employment when conducted in different sections of the country by varying methods. As, for instance, reference being made to the report of the Merrimac Manufacturing Co., of Lowell, pages 349 and 350 of the twentieth volume of the United States Census, a more accurate computation can be made of the variation in the rate of wages of men and women in each department of the work, from 1824 to the present time, than by any attempt to compile the wages of a large number of men in different States and in different places.

Or again, reference may be made to the returns of Mr. Geo. E. Fell and Amos Dotterer, page 33 and 34, volume 20, on the manufacture of bricks, which being considered in connection with the prices given of brick sold by Amos Dotterer, bear witness to the increased effectiveness of the work, even in the making of bricks, which is mainly a handicraft. Again, it may be assumed that the flour turned out from the mill of Mr. Russell Hinckley, page 59, has been substantially uniform from 1850 to 1880. Witness, however, the advance in the rates of wages in each department between 1850 and 1880, the reduction in the labor cost per barrel of flour, corresponding to the rise of wages, and the slight variation in the value of the product. Were this comparison made between 1850 and 1887 the contrast would be yet more striking.

Innumerable examples may be found in the twentieth volume of the United States Census, of the constant tendency of wages to rise, the cost of labor to diminish, and the price of the product to be reduced; and it may be readily ascertained by correspondence with many of the firms whose titles are given in this invaluable volume, whether or not a given article has been produced of the same kind and quality during the period covered by the report. This volume therefore lays the foundation for what may be called a

science of wages and earnings, which may now be converted into a true form and sustained by absolute demonstration. If the right measures are taken by an agreement of the Bureaus of Labor Statistics to work on a given line under uniform conditions, in almost every state in which a Bureau of Labor Statistics has been established, typical establishments may be found which have been in operation for a long term of years, which have never become bankrupt, and which have been uniformly profitable to their owners. In these establishments the workmen of various classes will have been employed under what may be called strictly normal conditions. If there have been slight interruptions by strikes or otherwise, they will constitute simple exceptions, but will not invalidate the rule deducible from the experience of these establishments. It is therefore suggested that a common form shall be made by which the Chief of each State Bureau may compile a set of tables in a given art, from which a law of wages and profits may be fairly deduced. I think the form of the law is as follows: Given free exchange, such as exists among the thirty-eight states of the Union; given the application of machinery and invention from time to time by the most skillful managers who have never failed in business, the record will prove—

1. That in each decade the capital invested in the plant will bear a constantly diminishing ratio or proportion to the value of the annual product.

2. The number of workmen or workwomen employed will also bear a diminishing ratio to the value of the product.

3. Taxes, wages and profits being alike derived from the sale of such product, the proportion of the product secured by capital will have steadily diminished; the proportion secured by each workman will have increased; the hours and intensity of the work will both have been reduced.

4. Except there have been some grave changes either in the burden of taxation or in the cost of the component materials of chief value, the price of each unit of the product to the consumer will have been reduced.

If such be the law deduced from experience from the application of the principle of competition to the conduct of business, the beneficent effect of competition will be made apparent and the higher law under which capital and labor must coöperate will be brought out conspicuously.

Again, in almost every establishment of any magnitude there will be found a certain number of mechanics other than those specifically skilled in the particular art; for instance, every large factory will employ, as a rule, its own carpenter, blacksmith, machinist, painter, fireman and engineer, one or more in each class; these will be representative of the same classes in other employments, occupied under normal conditions and free from the interrup-

tions in the work which affect the miscellaneous occupations of life, such as the building trades.

There is also a certain relation between the wages of those who are occupied in what may be called the factory system and those who are not thus employed; as, for instance, in the part of the country where textile manufacture is carried on, the wages of female domestic servants may be gauged very closely by the earnings of the factory operatives; the wages of locomotive engineers, in some measure, by the wages of engineers in factories; the wages of draymen in miscellaneous work by the wages of yard men in the factories.

In fact, may not the occupation of wage-earners be classified under a very few heads in which the rates at a given period will be substantially the same in each class? May not a sufficient number of classes be investigated in the manner heretofore proposed, to the end that the result or conclusion of the investigation of the specific factories may serve as a guide or check upon the miscellaneous statistics covering large numbers of persons? May it not be possible for the Chiefs of Bureaus assembled in convention to agree, or perhaps to appoint a committee to lay out the share of the work which each one shall undertake, and to make arrangements for the general comparison of the results or conclusion of each separate State?

Again: May not the purchasing power of each dollar of wages be substantially established by a comparison of the prices of certain necessities of life, which form the common consumption of working people in given occupations?

In my article for the *Century Magazine* for August, 1887, I made use of a formula in which I think that the articles named correspond to about 70 or 75 per cent of the average consumption or cost of living, including rent and sundries, of a mechanic in the eastern or middle States for himself and for each member of his family, counting two children of ten years or under as one adult.

If an agreement is made to take a certain unit of each of these articles to which the retail price at a given time may be applied—either by the use of the statistics of prices in the twentieth volume of the census, or otherwise, then an average comparison of the purchasing power of a dollar at different periods may be established. It would be desirable, if possible, that a unit of shelter, or rent should also be adopted, and that a comparison should be made of the cost of this unit of shelter; but the variations of climate and condition are so great as to make the comparison of rent much more difficult than the comparison of food, fuel and the materials for clothing. It seems to me that if such an agreement as I have suggested can be entered upon, more progress will be made in one single year in the application of statistics

to a true science of subsistence than has yet been made by all other efforts combined.

I suggest this plan for discussion with a view to ascertaining whether or not other observers concur with me as to the expediency and feasibility of adopting this method of comparing conditions; *i. e.*, the conditions of one period with another in the same place, and of one place with another at the same period.

If there is concurrence of opinion upon this point, might not measures be taken not only for the joint and several compilations of the specific statistics named in this memorandum, by the State Bureaus of Statistics of Labor and by the National Bureau, but also for the adoption of a permanent Census Bureau by the United States, under the direction of the Chief of the National Bureau of Labor Statistics, by means of which a true direction can be given to each census of the United States in the same lines.

The Secretary now read a paper by Prof. William W. Folwell, on

A PROPOSITION TO ESTABLISH A REGISTRAR-GENERAL'S OFFICE, AS AN EXECUTIVE DEPARTMENT OF THE UNITED STATES GOVERNMENT.

The author took the ground that "the time was near when it will be a wise policy for the general government to collect into one executive department a number of scattered *statistical offices*, and then to extend and organize such department on a great and permanent scale. This new department would take some such title as 'The Registry-General of the United States,' and the head of the department would be 'The Registrar-General of the United States.' The department should have rank with those of war, navy, treasury, etc. Whether the head should be a member of the Cabinet is a side question not needing present consideration."

"Considerations of economy, convenience and consistency conspire to justify the assemblage of all purely statistical agencies at the seat of government into a single executive department."

"The new department of the general government ought in no manner to interfere with or supersede existing State Bureaus. The organization should be such as to employ and encourage all such agencies. A suggestion as to the way of effecting this object may be found in the existing arrangement for reporting the results of the Intermediate State Censuses to the Census Bureau of the general government."

The originality of the suggestive points in the paper were enjoyed by all, and on motion of Mr. Lamb the paper was referred to a committee.

Mr. Flower appointed the following gentlemen as the committee: Messrs. Lamb, Hotchkiss and Simpelaar.

The Secretary now read the following paper, by Mr. John Lamb, Commissioner of Minnesota, on

THE PRACTICAL ASPECTS OF THE LABOR QUESTION.

It is no uncommon thing, in these days, to find books and pamphlets purporting to give the solution of the labor question. A majority of the books are not unpretentious. With few exceptions, they tell us in effect, that the author has sounded the depths of all social philosophy, unraveled all the complications of society, and reduced the whole to a few simple principles, whose application is easy, and whose working is perfection itself.

It is not unusual for such men, after they have launched their theories from the wharf of a printing press, to go out into the world and work with desperate zeal to make converts to their plans, and secure their application. It is fortunate that so many of them do this, for otherwise they might never come in contact with the actual labor question or know what it is.

"My plan is perfect," says the theorist. "I will explain it to every one I meet; they will at once perceive its excellence, for it is perfectly clear; these converts will make others; the doctrines will spread rapidly; I shall soon have converted the world!"

He begins operations. He soon discovers that people are not so easily converted as he supposed they would be, but he finds a few who are willing to accept his teachings. He begins to suspect that many people need education before they can comprehend his theories, much less apply them. He thus comes in contact with the first practical aspect of the labor question—the great need of education on social and industrial questions. Neither he nor his followers can reach all these people and educate them. It becomes evident that the world can not be changed in a few years. People persist in doubting the merit of his theory until it has been proved a practical success by experiment. There is nothing left but to try the experiment. He and his followers determine to do so. They form an association, and contribute some of their individual means to begin operations. This is done with a fair degree of harmony, as the workings of the association have not yet begun to materially affect the private interests of those connected with it, and each member can, thus far, calculate his exact interest in the enterprise.

Practical work now begins, and is carried on for some months, perhaps a year. During this time the desire of some individuals to avoid their share of the work and responsibility has manifested itself. The desire of others to exercise an unwarrantable influence, and secure controlling places in the management, has become apparent. The unwillingness of the more capable and energetic members to sacrifice much of their time and ability for the

benefit of those who possess little capacity has begun to show itself. A difference of opinion and sentiment has begun to develop, not only with respect to business matters, but also in regard to social, religious and educational affairs. There is an evident tendency to divide into factions, and this feeling is, no doubt, encouraged by some designing person who would rather be the first man in a small faction, than the second man in a peaceable community. The theorist has now come in contact with the second practical aspect of the labor question--the selfishness, ambition and dishonesty of men.

If the theorist happens to be gifted with a mind capable of reasoning inductively, he will have discovered, by this time, that the labor question will be solved, not by a plan, but by process; not by a jump, but by a growth. He will have discovered that lack of character and capacity constitutes an obstacle to human progress quite as great as lack of favorable conditions in man's environments; and he will also have discovered that environment has much to do with shaping character and capacity, and that character and capacity have much to do with determining environment. He will realize that the most practical scheme of redemption must address itself, not merely to the betterment of man's external conditions, but to the development of his inner nature.

The church and school elevate men by bettering the character of the individual; the industrial and political organizations, by bettering his surroundings. All of these perform important functions in the general work of progress; but there is naturally a tendency on the part of each to overestimate the value of its particular function.

Human development cannot safely follow the lines of any one theory. For centuries the dominant ideas of mankind were mystic. Things tangible were subordinate; the unknowable was the all-important. Under the prestige of this idea the philosopher became an outcast; the old woman a witch; the inventor a raw-head and bloody bones, intent upon the ruin of mankind by enabling men to do more in one day than they could formerly do in two. This was followed by the reign of the political idea, which reached its natural climax in the French revolution and universal suffrage. The suffrage has not proved a panacea for all public wrongs, and now the world turns to the industrial idea, hoping to find, in proper industrial conditions, the final and proper organization and adjustment of society. All these movements, when not carried to extremes, are in the line of progress, but no one of them can give man his complete development. Let the plan of industrial organization be as perfect as it may, the defects of individuals will vitiate the workings of the system, and manifest themselves with more or less of evil in public and private life.

In a world where a majority of minds are passive it would seem as though they could be easily moulded and directed by the thought of active and constructive minds, but the reverse is the case, except during the early years of pupilage, when the knowledge imparted is simple, and seldom or never disputed. The truth is that the thinkers of the world differ so much among themselves that the passive mind is bewildered with the multitude of theories, and either accepts the one which is most often and forcibly impressed upon it, and becomes active in that particular direction, or tires of all the effort to understand such a complex as society, and drifts with the strongest wind or highest tide. I have often sat in a meeting and heard men applaud a sentiment the very reverse of one which they had applauded a moment before, not because the latter was more meritorious than the former, but because it was more ably presented. Such men have no anchorage; their minds are passive, or, at best, receptive; the active, creative intellect sways them like the reed.

The question is often asked: Are the ideas of men unified or differentiated by education? Apparently there is as much difference of opinion among the intelligent as among the ignorant, and this difference is especially noticeable in discussions upon the industrial question; yet I believe a closer scrutiny will reveal the fact that the range of subjects upon which the intelligent agree is not only greater than those upon which the ignorant agree, but, in many cases, greater than the whole number of facts of which the ignorant have cognizance; but as thought becomes unified on familiar facts and phenomena, deeper facts constantly reveal themselves, which furnish to the thoughtful a region of inquiry not, perhaps, of so much immediate importance, but of quite as much ultimate importance to the welfare of the race.

Admitting, then, that evolution is a unifying and not a dismembering process, we find the lack of this development the main stumbling block in the way of rapid human advancement. For my own part, look where I may, I cannot get away from this thought. Little that is valuable in this life comes to men or to nations except through a process of growth. There is really nothing to sustain a forward step except antecedent growth. Hence the impossibility of forcing conditions upon men much in advance of the men themselves. Here is where most theorists and legislators fail. They have been trying to make humanity fit their plans, instead of making their plans to fit humanity; they have assumed to know more of the future than the future will know of itself.

I know of no task more difficult than to maintain a proper balance between the conflicting opinions that are battling for supremacy in the world.

Theories are seductive things, and the desire to see something accomplished naturally leads men to espouse some special plan of action, because it appears so hopeless to attempt to cover the whole field of progress at once. Nevertheless this general development forms the only sound basis of support for any theory or plan of far-reaching importance.

Just in proportion as thought is unified among the active minds in any community will progress in the direction of that unification be rapid and permanent; but this unity of thought may be in regard to one subject or many. If it is upon one subject only, it is very likely to run eventually into a narrow fanaticism, which stimulates action in one direction at the expense of equally important action in other directions. The greatest progress will take place when breadth of knowledge and liberality of thought are greatest and most uniformly diversified.

If there is one class of men whom the world needs to-day it is that class who can tear the cobwebs of prejudice from their eyes and look upon both sides of a question with the utmost impartiality; and if there is one means which, above all others, will enable men to do this when they desire to, that means is facts, statistics. I believe the world is beginning to understand, as it never did before, that there has been too much empiricism in legislation and in the arrangement of our industrial and social affairs. When facts and not guess work are made the basis of action, the action will, of necessity, be sound and enduring.

With all its evils and drawbacks, society is making more progress to-day than it ever did before. Thought and action are becoming liberalized and broadened. The race of men is becoming more cosmopolitan. Government and institutions are being conducted less upon the basis of speculation, and more upon the basis of intelligent common sense.

For I doubt not through the ages one unceasing purpose runs,
And the thoughts of men are widened by the process of the suns.

THE BREAD LINE.

BY MATT. J. SIMPELAAR, DEPUTY COMMISSIONER OF THE WISCONSIN BUREAU.

In this paper, intended to be a brief retrospective view of the social condition of the producing classes, I hope to demonstrate that there has been a steady visible improvement; that the invention of machinery and the application of new powers have been the greatest agencies in promoting that improvement, and that the indications of the present are that the improvements will continue.

Bread is the primitive, natural motive of all labor. It is the mainstay of human subsistence. Next in importance come clothing and shelter. The

three comprise the immediate necessities of life—the condition I wish to denote by the term, “*the bread line.*” But the subject which most interests us is the discussion of a comparison of the condition of the producing classes under the domestic or proprietary system which preceded our present factory system, with the wage-workers of to-day.

Though general history is silent upon the common affairs of the world, and no statistics, and but very few facts of an economical nature are to be found, it is not difficult for us to imagine life a hundred years ago. A good many traces are left of it even to-day, in Europe especially as well as in rural districts, and the smaller towns of this country.

We can well imagine a time when only small workshops instead of large factories were known; stores attended only by the shop-keeper's wife or his daughter, the shutters of which were securely bolted at 7 P. M.; a time when the post coach was the quickest means of transportation; a suit of clothes was made to last a number of years, and houses were built to stand for many generations.

Of foremen, superintendents, book-keepers, clerks or agents there was no need. The “boss” or master combined all these in himself, while he made a fair living upon the profit of the work of six or seven apprentices, and probably one journeyman.

In order to better illustrate the fact that the social condition of the producing classes has steadily improved, allow me to introduce you into the State of Wisconsin, in an imaginary trip through its manufacturing centers, visiting factories and shops, peeping into the homes of the operatives, and taking a careful survey of our surroundings. Let us first take Milwaukee as a fair representative commercial and manufacturing city, and a good example of the industrial transformation wrought within the last seventy years. We find here a city, not yet fifty years old, with 180,000 inhabitants.

The building improvements during the year 1885, summed up the grand total of \$4,569,250.

Who owns these beautiful residences, these splendid stores, these giant factories, these thousands of neat though humble homes? Great capitalists, landlords, aristocrats? No, Milwaukeeans. Native Americans who left their eastern homes with little or no capital, to build new homes, new factories, new industries in the northwest, by energy, enterprise and hard work. Europeans, who, at middle age, saw that their fatherland afforded them no homes, no bread, no prospects. Do you see that hill over yonder with its thousands of new roofs? There live the hardy people who came hither less than fifteen years ago, rich only in the number of children they brought with them, but very, very poor in all other worldly goods. They own these homes;

no heartless landlord or agent, controlling numerous tenement houses, bothers them. What made this fact possible? Nothing but the invention of labor-saving machinery.

Let us peep in. Did you notice how nicely the little garden patch is laid out; how well the house is painted, and the fence kept in repair? Let us ask a few questions of the good housewife. She says that she came to this country with her husband and four children about ten years ago. The homestead is their own, and is worth about \$900. Her husband works in a foundry as helper at \$9.00 per week. He was a farm laborer in the old country. One of her sons works in the same shop as machinist, and receives \$2.35 per day; a younger son is clerking, and earns \$1.00 per day. Her oldest girl is working in a knitting factory, and brings \$5.00 home every Saturday. Three young children are going to school.

Look over there. See those hundreds of merry children enjoying the school recess of fifteen minutes. Better wages of parents in this country, and the invention of machinery, which has brought these better wages and the product of their labor within reach of the poor man.

Journeying down towards the manufacturing center of the city we see hundreds of men at work in the building trades. Is any one so blind as to say that these houses would be built as well if all the materials were to be prepared by hand process?

It is here that we see the fact well illustrated that the invention of labor-saving machinery and tools has created an enormous percentage of hand labor. Machinery built by machinery has become the greatest labor-making agency in existence.

Wisconsin has in all about 117 foundries and machine shops located in all parts of the State. In them no less than 11,857 men find employment.

We have just reached the largest establishment of the kind in the State. The wages paid here in 1887 reach nearly \$650,000. In these shops 1,190 men are steadily employed. Their annual earnings, skilled and unskilled alike, average \$530.10. Of these 1,190 men, only 750 are engaged in productive labor—in the limited meaning of the word. Strictly speaking there is no unproductive labor. The work of these 750 men engaged in building machinery furnishes employment to 440 unproductive workmen, to say nothing of the labor required in building the mammoth shops, and the enormous job of transporting the raw and finished material. These 440 employes are divided as follows: 270 laborers, 20 foremen, 64 bookkeepers and clerks, 17 agents, 8 engineers, 7 firemen, 9 teamsters, 28 draughtsmen, 14 watchmen and 2 electricians. Here, then, we have more than 37 per cent. of labor *created* directly out of the work of building labor-saving machinery.

A day or two previous to our departure for this Convention the Wisconsin Bureau received a statistical report from another factory (iron works) too good to be omitted in this paper. The establishment employs 1,315 men, who averaged 280 work days in 1887. The total pay roll for the year amounted to \$796,585.40, an average to every workman of \$605.76. Here again we find 466, nearly 36 per cent. of all the employes engaged in unproductive labor; or, rather, employment created by the work of the remaining 64 per cent. Sixteen branches constitute the real skilled workmen whose average annual earnings are \$1,087.80, the highest reported for the State. The most conspicuous fact in this case is that the comparatively few who have attained to unusual skill practically feed and support the remainder.

Shall I give another illustration of the labor-creating power of labor-saving machinery? Twenty-five years ago I entered upon my bread-earning career as "devil" in a printing office. Inking and washing forms was my daily task for three years, until my hands were as calloused as those of the pressman, who pulled the lever of a large hand press at the rate of 200 impressions per hour, which was, and is yet, considered a fair rate.

I have seen the printing press improved, until to-day we have the Scott-Webb perfecting press, capable of delivering 30,000 copies of a metropolitan newspaper, printed on both sides, pasted and folded, in the space of one hour.

What has been the result of that invention increasing the product 150 times? It has created a new demand, until newspapers and books are indispensable in the humblest home. No one will contradict the statement that the inventions in the printing trade have created a number of subdivisions almost unknown before. Stereotypers, engravers, type founders, electrotypers, book-binders, rulers, bill posters, etc., are now ordinary callings. We might add the great unknown quantity, editors and reporters.

In the mere preparation for manufacture of lumber to build homes, no less than 60,000 men find employment in the saw mills and pineries of Wisconsin. Our share of the product of their labor gives further employment to 990 men in our planing mills; also to 3,142 in the manufacture of sash, doors and blinds, and to 3,655 in converting that half raw material into furniture. Astonishing figures! happy facts!

Follow me into a furniture factory. We find here in all 165 men employed. Of these 21½ per cent. are unproductive. Of the total, 95, or 57 per cent., work by hand, matching or finishing the work commenced by machine. The average annual earnings of skilled and unskilled men alike are \$501.06.

Let us look into one of our tanneries. Here we find 191 men. Of these 79, or 58 per cent., are engaged in unproductive labor. Sixty-eight, or more

than 35 per cent., are unskilled. The general average of yearly wages here is \$474.81.

Now, then, to the place where the leather manufactured here is made into foot wear. We see a good many women among the 450 "hands" employed here. They all work 310 days of the year. Only 45, a little less than 15 per cent., of these are unproductive. Of the others, 64, or 16½ per cent., work exclusively by hand. The average annual wages of the really skilled operatives is \$627.40. This leaves \$308.01 per year for all other operatives.

In conclusion, allow me to say that I firmly believe that in this blessed land, dotted with factories and covered with farms, instead of castles and palaces, no man, able and anxious to work, need live below the bread line, or eat "the sour bread of poverty."

At the conclusion of Mr. Simpelaar's paper he was questioned as to the reliability of his figures as to wages, loss of time, etc. Mr. Simpelaar stated that they were perfectly reliable, and literally true.

Mr. Bowditch said he did not sympathize with the sentiment of the paper regarding the need of more factories. Rhode Island had too many. The need is for agriculturists.

Mr. Hutchins said the sentiment of Iowa was in harmony with that of Wisconsin. A home market for what the soil and labor thereon produced was the need of Iowa.

Mr. Hotchkiss said that Connecticut had more factories in proportion to its territory than any other State in the Union, and that while many of the operatives were receiving excellent wages, there were others who did not. In the textile factories from \$1.10 to \$1.15 are the daily wages of men. The operators seek men of large families, so that members of the same could be hired, and at small wages. In the metal industries the conditions were better. From \$1.35 to \$1.50 is received daily. No wives work in these factories as in the others.

Prof. Bemis, of the Vanderbilt University, of Nashville, Tenn., who was a very welcome visitor to the Convention, said manufactories unquestionably stimulate the energies of the people. This is illustrated in the Perry stove works in Tennessee. Eighty per cent. of the operatives when first employed could not read, and were paid simply apprenticeship wages. They now earn from \$1.25 to \$1.50 a day, they save their money, build homes, dress better, and are improved in every respect. This does not hold good in all factories. In the cotton mills at Nashville the shiftless have been taken; 50 to 75 per cent. cannot read or write. There are at least one hundred children employed who get no schooling, and while they are no more ignorant than when they commenced yet their ignorance is of a more dangerous character. In a

recent railroad election such operatives were readily bribed. We can have factories without these evils, but the sentiment of the people must be roused. In this direction these bureaus are doing a vast good. One field of work for them should be to seek to have laws enacted prohibiting married women and children from working in factories.

Mr. Lamb spoke of the women wage-earners of Minneapolis. (As this is a matter of great interest, and is attracting wide attention, the Secretary asked Mr. Lamb to prepare a résumé of the whole matter, and he has kindly done so. It is as follows:)

ST. PAUL, MINN., May 25, 1888.

Col. E. R. Hutchins, Secretary National Convention of Chiefs and Commissioners of Bureaus of Labor Statistics:

DEAR SIR,—In accordance with your request I hereby send you a more detailed statement of the facts in connection with the recent strike at the establishment of Shotwell, Clerihew & Lothman, in the city of Minneapolis, than the verbal statement which I made to the National Convention at Indianapolis.

The aforesaid firm conduct a wholesale business as jobbers in dry goods and manufacturers of the rougher qualities of men's clothing, such as cassimere pants, overalls, jackets, jumpers, shirts, etc., employing in the manufacturing department about 250 girls and women. It is unfortunate that the firm refused to give me any information, as it has been necessary for me to glean the facts from the statements of the girls, who were on the strike. Wherever there was any doubt or evidence of contradiction in the testimony of these girls, I have rejected it and accepted only the evidence in regard to which there was universal concurrence on their part.

It appears from the evidence that the prices paid by this firm, one year ago, for the different classes of work, were substantially the same as those paid by the other firms doing a like business in St. Paul and Minneapolis, but that shortly after the advent of the new superintendent—Mr. Woodward—a series of reductions was inaugurated extending nearly to the time of the strike. These reductions were as follows:

Shirts, from 5 to 8 cents, from 8 to 5 cents, and from 14 to 12 cents.

Jumpers, from 5 to 8½ cents.

Jean pants, from 10 and 11 to 8 and 9 cents; from 16 to 15 cents, and from 14 to 12 cents.

Cassimere pants, from 18, 19 and 20 cents to 14 cents. This was the reduction that brought on the strike.

Engineers' jackets, from 9 to 6 cents.

California overalls, from 18 to 7 cents.

Rib overalls, from 8 to 5 and from 6 to 4 cents.

Double seamed overalls, from \$1.20 to 90 cents per dozen.

All the above reductions have been made within a space of seven months.

Reduced to a percentage, they show an aggregate reduction of 24.5 per cent.

Before quitting work the girls sent a committee to the firm and stated their grievances. They were referred by the firm to the superintendent, Mr. Woodward, who, they were told, had full charge of such matters. The committee saw Mr. Woodward and asked for an increase of 2 cents on each article manufactured in the shop, so as to bring the prices up to where they were previous to last Christmas, and place the shop

on an equal footing with other shops of the same kind in St. Paul and Minneapolis. Mr. Woodward refused to do this, and about 200 of the girls thereupon quit work. About a week afterwards the strikers' grievance committee sent the firm the following proposition of arbitration :

Messrs. Shotwell, Clerihew & Lothman:

GENTLEMEN,—Inasmuch as we believe that a real desire exists on the part of your firm to reach a just and reasonable settlement of the difficulty with your former employes, and knowing that the same desire exists on their part, we hereby propose, with your consent, to submit the questions in dispute to a board of arbitration, agreeing to abide by the decision of such board. If the firm express themselves as favorable to this plan, and will so notify us, we will at once proceed to make arrangements with you for having such board selected, as there will be a full meeting of the employes at 2 o'clock this afternoon. We respectfully request an answer by that time.

Yours respectfully,

GRIEVANCE COMMITTEE.

The firm refused to consider this proposition. A public meeting was then called, which was addressed by Rev. Mr. Wilkinson, Mrs. C. O. VanCleve, Mrs. Marble, Mrs. Smith, and other ladies of the city, all of whom have been engaged for years in humanitarian work in behalf of women. A unanimous vote was passed at this meeting again asking the firm to arbitrate, and appointing Rev. James McGolrick and Rev. Wm. Wilkinson a committee to convey the wishes of the meeting to the firm. These gentlemen called on the firm as directed, but the firm refused to consider any proposition to arbitrate. During all this time the daily press was urging the firm to arbitrate.

A few days after the above mentioned meeting a report was given to the papers by a committee of the Jobbers' Association. This report placed the action of the firm in a much more favorable light than it had appeared before. Unfortunately, however, the Jobbers' Committee made their report solely upon the evidence furnished by the firm, not having consulted the girls or asked them to testify. The committee made no comparison of the prices paid by the firm with the prices paid by other firms in the twin cities for similar work. They referred to only two of the reductions that were made during the last year. They gave no explanation of the firm's refusal to arbitrate, nor their refusal to give the girls their time books, so that an accurate compilation of wages actually received could be made. These discrepancies, coupled with the fact that a member of the firm is President of the Jobbers' Association, really vitiated a report which might otherwise have been of great value.

The whole affair is unfortunate to the city, the firm and the girls, and shows the necessity of some means to settle such disputes without resort to strikes, boycotts and public vituperation of individuals. There is generally in such cases some middle ground upon which reasonable and fair minded people may stand; and when we consider the evils which come to the parties to such differences, and the public generally, it is plain that the public welfare would be subserved by the institution of means by which this middle ground can be reached.

Yours very respectfully,

JOHN LAMB, *Commissioner.*

[Since this was written this firm has failed in business.—SEC.]

Continuing the discussion of Mr. Simpelaar's paper, Mr. Driscoll took strong ground against labor saving machinery, believing it has cheapened

labor, led to child labor, and hence to the demoralization of children, and to the degradation of woman.

At 6 o'clock the convention adjourned until 7.30.

EVENING SESSION.

The session opened with a full attendance, there being a number of ladies and gentlemen present in addition to the members.

On motion of Mr. Hutchins, all speeches were limited to five minutes.

The Secretary read a paper by Mr. Bert Stewart, of Illinois, on

WORK AND THE METHODS OF DOING IT.

The paper was an excellent one, but of too great length to publish in full in this report. The following are the salient points:

Mr. Stewart expressed the hope that "nothing I may have to say upon methods will be construed as aimed at the men who have used, or are using them."

In what I shall say of some methods of investigation, I have been guided by the belief that a discussion of methods before the men who shall use them, will lead to better results than magazine articles criticising in a wholesale way the reports of the various States.

One of the methods of statistical inquiry now too much in vogue is what may be termed the "Reporters' Method." I am glad to notice that it is being abandoned in many quarters.

Interviews with, and the opinions of, any number of thousands of working-men or employers do not constitute statistics, and it is doubtful if they indicate much of anything.

Interviews and opinions make interesting reading, and modern newspapers have introduced this method of filling up space, with great success.

It is utterly unstatistical and absolutely worthless as a method of inquiry, fills page after page with individual opinions, which if representative of a class, are already well known, and if not are worthless; worthless anyhow as statistics, for statistics are made up of facts and not of opinions. As supplementary to a statistical investigation, the opinions of interested parties may often have real value, as in the matter of convict labor, the opinions of manufacturers as to the effect of prison competition upon free labor, may have weight and be of great corroborative value. But even then opinions can never constitute statistics, and should perhaps be relegated to an appendix.

The most apparent difficulty with the method of sending out blanks, *is that they stay out*; and of the few returned a large percentage are virtually

as blank as when sent out, so far as statistical value is concerned. A less apparent, but even more fatal objection to the blank system is that few persons fill them with care.

Akin to the interviewing or reporters' method, is the interrogatory method, by which a general and impersonal investigation is carried on by personal inquiries. I admit that certain lines of investigation can be carried on by no other method, at present practicable; but I sincerely doubt if the truth will ever be reached in any of these lines until we reach it by some other route.

This brings us to methods of taking the record evidence. I seriously doubt if letters and interrogatory circulars to clerks of courts and county officials will ever furnish us with reliable data.

I do not wish to be understood from this as inferring that records taken by the clerks of courts, where each case or instrument is required to be scheduled separately, would be inaccurate as data. I refer simply to the "letter of inquiry method." I look upon these letters of inquiry to public officials as being no more reliable than any other form of personal inquiry.

There are many things absolutely beyond the reach of statistical research; things past finding out. The personal inquiry method fits all of these, and lures one to attempt them.

I believe improvements will be made by the departments here represented, and rapid improvement, not only in methods of obtaining the best class of facts upon subjects considered, not only in better defined ideas of the limits of statistical work, but also in thoroughness.

I believe that one great drawback has been that too much has been attempted; too many subjects at once.

An annual report or biennial report upon a single subject, and that subject thoroughly sifted and exhausted, is infinitely better than a large range of subjects with limited range of data upon each.

I believe this shotgun practice will be abandoned for the rifle, and that with a little more practice the bell will ring every time one of you pulls a trigger.

Each year has shown marked improvement in the work of the bureaus and the improvement will be more rapid from now on, than before.

The bureaus are already better equipped to do their work, and do better work than many much more pretentious departments of government.

This paper was listened to with keen attention, and brought out a general and animated discussion.

Mr. Fassett said he heartily endorsed the sentiment of the paper regarding mortgage indebtedness, and the Census Bureau. He believed in personal interviews, and agreed with Mr. Stewart in opposing the blank system.

Mr. Hutchins said that the paper showed conclusively that Mr. Stewart was an apt pupil of a good teacher, positive in his plans for doing bureau work. While the paper showed careful preparation, yet there were many things in it he very strongly opposed: For example, the criticisms upon the blank system. True, it has its serious objections; so has every other system. The wage-workers of Iowa are rapidly learning the value of the bureau, and the blanks returned to the office were largely good, and could be relied upon. Where there is a scarcity of funds to carry on the work, as is true in Iowa, this blank plan is the only one practicable. So far as the "views of workingmen and women," as published in the various reports, is concerned, he was astonished that any one who, like Mr. J. J. Stewart, has been engaged in statistical work, should oppose the publication of such matter. He regarded them as the *best* features of many reports. He had received letters from all over the country expressing great satisfaction in the views of wage-workers, as appear in the Iowa report. Above all else they lead the law-makers up to legislating for the good of employer and employed.

Mr. Betton said he heartily indorsed what Mr. Hutchins had said. Like Iowa, Kansas has but a scanty fund with which to operate the Bureau. Hence the *necessary* use of blanks. He had found them largely satisfactory and authentic. He called attention to the analyses of wages in Iowa, Kansas and Canada, as given in his last report, as proving the reliability of figures given on blanks by workingmen.

Mr. Bolles said it was utterly impossible to secure reliable figures on the matter of indebtedness in many cases, and offered the following resolution, which was unanimously adopted:

Resolved, That in the opinion of the members of the Convention of the Commissioners of Statistics, assembled at Indianapolis May 22, 1898, the net mortgage indebtedness of the country should be included in the scope of the next national census, such investigation including also judgments to secure which real estate has been attached.

Mr. Lamb spoke against the idea in Mr. Stewart's paper limiting the work of bureaus to record evidence as wholly untenable and impractical. He had been satisfactorily successful in personal interviews, and believed such a plan, as well as the blank system, feasible and practical.

Prof. Smart, President of Purdue University, being present, was cordially welcomed as he rose to suggest that the great drawback to the work of the bureaus, as it seemed to him, was the desire to cover too much ground. He believed people must be educated up to this work. You can't give them a whole spelling book as a lesson for the first day.

Mr. Driscoll regarded the position of Mr. Stewart in reference to the views of workingmen as totally wrong. Such views in all the reports he regarded as of the greatest value.

Mr. Matthews said that the "views of workingmen" bring the Bureaus into harmony with the wage-workers. For this reason, if for no other, they were of great value. He had used the blank system almost solely, and under it the Bureau had made steady and successful advance.

Mr. Flower endorsed what Mr. Matthews said regarding the views of workingmen, and added as another reason why they were of value the fact that they led to the framing of good laws for the unemployed.

Mr. Barnes said that while the blank system might be somewhat faulty, yet it was of vast value. He urged that the wage-workers should be encouraged in keeping a blank-book for their receipts and expenditures—book-keeping on a small scale. It would lead to accurate returns for the bureaus.

Mr. Barnes in reply to a question, said that it was safe to say that the investigation in his State as to mortgage indebtedness showed that fully one-half of those reported were those on which record payments had been made.

Mr. Bishop moved a reconsideration of the vote by which Denver was selected as the place for the next Convention. It was urged in support of this by Mr. Bishop and others, that Denver was too far from a large majority of the Bureaus, and that the meeting should be held where an opportunity could be given for an extended investigation into the condition of wage-workers.

The motion was carried, and Hartford was chosen.

Mr. Barnes suggested that a special invitation be given to manufacturers, professors and students.

Prof. Bemis hoped that this would be carried out. He said he had already been richly repaid for his long journey here.

The Secretary now called the roll of States, that the Commissioners might give a brief outline of the work in which they are now engaged. The following are the responses to the call:

National Bureau.—The fourth annual report of the United States Bureau of Labor will relate entirely to workingwomen in cities. This work is in the hands of the clerical force at present, and will be published this fall.

The field force is engaged in collecting the information relating to the condition of railroad employés in all possible directions—the wages in classified form, and all the conditions surrounding such labor. Among the various items on which we are calling for information in the investigation are the following:

Under what conditions and for what purposes are employés allowed free transportation?

Are families or friends of employés transported free of cost?

Are supplies for personal use of employés so transported?

If employ  s are required to wear uniforms, is the expense of the uniform borne by corporation or employ  ?

Are engineers and firemen paid the full and usual wage for a run in the case of a disabled locomotive?

In case of other accidents does an employ   receive full pay?

What offenses, if any, result in fines or deductions or enforced furloughs?

What apprenticeship is required for any occupation?

Are mental, moral or physical tests of fitness for entrance into the service required, and if so, what are they?

Are such tests required for promotion?

What system of technical instruction for the improvement of employ  s in the duties of their various positions is afforded by the corporation?

What restrictions are placed on the use of intoxicating liquors?

Are dwelling houses for the use of employ  s furnished by the corporation?

The statistics of beneficiary institutions.

Do the railroads assist outside beneficiary institutions established for, or which contribute to, the advantage of their employ  s?

Are superannuated employ  s pensioned?

Information relating to fatal or disabling accidents to employ  s, and many other points of value.

Massachusetts.—The Massachusetts Bureau is engaged in the final work of the census of 1885. It has published two volumes, and the remaining two are nearly completed.

The nineteenth annual report will consist of a chapter on "Citizenship," taken from the census of 1885, and also information in regard to markets and transportation of products, the relation of wages to cost of production, and a chapter on "Strikes."

The report on "The Distribution of Wealth," which was intended to form a part of the nineteenth annual report, will find a place in the twentieth, the work of the census necessitating its being thrown over.

Pennsylvania.—The forthcoming report and work now engaged in relates to (1) relief afforded to workingmen in case of sickness, accident, etc. The returns from this line of investigation are excellent.

(2) Wages and days employed in mills in operation. About 7,500 blanks have been sent out in this line of work, and about one-third have been returned in authentic form.

(3) The obtaining of statistics regarding wages in a few of the large concerns in the State.

(4) Two papers have been carefully prepared by those competent to do the work, one on the history of the Knights of Labor Order in Pennsylvania,

and the other on the history of the Amalgamated Association of Moulders.

In addition there will be a minute description of two of the largest industries in the State—those of the Johnstown Iron Works, where 10,000 men are employed, and the Disston Iron Works, which employs 1,800. These will be profusely illustrated. The descriptions will refer especially to contracts, mode of life, etc.

Next year it is proposed to take up the investigation of building associations and workingmen's insurance organizations.

The Convention adjourned until to-morrow morning.

At eight o'clock Wednesday morning the gentlemen in attendance upon the Convention were driven in carriages, as guests of Mr. Peelle, about the city, enjoying a very delightful ride. They visited the United States Encaustic Tile Works, spending nearly two hours in examining this plant. Every facility was afforded them by the proprietors, who personally conducted them through this large establishment, in which the beautiful specimens of work, as well as the utilization of natural gas as a force, were shown and explained.

At eleven o'clock the

MORNING SESSION

commenced with a continuation of the roll call for reports from States.

Ohio.—Mr. Gessaman said there were three topics engaging the attention of this Bureau, (1) investigation of condition of working people on railroads and street railroads. (2) Mortgage indebtedness on real estate, with rate of interest and assessed valuation and number of mortgages given annually in each township. (3) Woman and child labor.

New Jersey.—Mr. Bishop said: The eleventh annual report of the New Jersey Bureau will be mainly devoted to an examination into the condition of working women and children in the State. It is desirable to ascertain what proportion of married women are compelled to go into the factory in order to contribute to the support of the family because of the low wages paid the husband and father; also, whether there are heads of families whose idle and dissolute habits compel the wife to go to work in order to support the family. Probably two of the leading industries of the State will receive the attention of the Bureau.

A report will be made upon the condition of the building and loan associations, and a chapter will be devoted to strikes.

Indiana.—Mr. Peelle said: The forthcoming report of the Indiana Bureau of Statistics will contain a succinct account of the commercial, industrial and educational interests, shipping facilities, bonded and floating

indebtedness, and population of the cities and county towns of the State, tables showing the products of the farm, the dairy and the barnyard by counties, with deductions therefrom; the number of the several classes of industries operated in Indiana, hands employed and capital invested; also tables showing the expenses and indebtedness of each county, business of the courts, jail and pauper statistics, educational and vital statistics, real estate transfers and mortgages, land and lot owners, etc., etc. The report will also contain articles on natural gas, the drought of 1887, and other subjects.

Michigan.—Mr. Barnes said that the work of the Michigan Bureau would be almost entirely given to wages and condition of wage-workers in coal and copper mines, slate quarries and gypsum beds of the State.

Wisconsin.—Mr. Flower said the work of this bureau will include:

Actual rate of wages for 1887.

Actual earnings for 1887.

Actual time employed in 1887.

Actual lost time in 1887.

Actual hours of labor in the subdivisions of the trades.

Desirable or unfavorable local conditions for home ownership.

Effects of different occupations upon life and health.

Trade diseases.

Terms of apprenticeship in all occupations.

Ages at which persons begin work in the various occupations.

Ages at which men in different trades begin to decay.

Birthplace or nationality of skilled artisans.

Material effects of immigration on trades and professions.

Time and manner of paying wages.

Deductions from experience of artisans as to what are at present the most desirable occupations.

This is but a small part of the work of the Bureau, the labors of the several factory inspectors, such as eliminating child labor, securing safety in public buildings, factories, school-houses, hotels, machinery, etc., being extensive and important.

Iowa.—Mr. Hutchins said the usual workingmen's blanks would be sent out. These cover loss of time, annual earnings, how paid, etc.

Farm labor will be a special line; also child labor, upon which the last General Assembly directed the Bureau should make a report.

The question of taxation will also be discussed, especially that of municipalities. In addition to these the subject of woman wage-earners will be taken up. Mr. Hutchins expressed himself as deeply in earnest on this theme, and spoke of the splendid work done in this direction by Dr. Jennie

McCowen, of Davenport, Iowa, in the formation of a workingwomen's club, etc. He had expected a paper from this person upon the subject, but it had not reached him.

[Since my return home I have received the following letter, which I am sure will be of interest to the readers of these proceedings.—E. R. H.]

OFFICE OF THE WORKINGWOMEN'S L. A. H. CLUB, }
Davenport, Iowa, May 21, 1888. }

E. R. Hutchins, Secretary, etc., Indianapolis, Ind. :

MY DEAR SIR,—Your favor of the 26th ult., asking me to write a paper to be presented at the National Convention of Labor Commissioners was duly received. I thank you for the honor intended, and beg leave to assure you that I appreciate it, but for various reasons must respectfully decline.

I am much interested, however, in some of the questions to be considered by the Convention, and should be glad, indeed, if more women took an intelligent interest in their discussion, and would assist, so far as they are able, in giving you facts in relation to their work upon which to base your deductions. But the science of statistics is a comparatively new one in the west, and especially so to women ; and, at first thought, the questions of the Bureau are resented by numbers of them as an unwarrantable impertinence. How much they earn, how much they save, what it costs them to live, etc., are regarded as personal matters not to be meddled with by strangers, much less to put in a book for all the world to read.

The women wage-workers of Iowa are favorably circumstanced. The squalor and wretchedness of the densely populated cities of the east and of the old world are comparatively unknown to us, hence the attention of the public at large has not been attracted in this direction, nor have the women themselves given much thought to any interests but their own. But while there can be no dividing line between the interests of men and women, neither can there be any division in the interests of workingwomen between the better and the poorer classes, nor can any woman's best interests be solely a personal matter ; and our women are coming more and more to realize this.

I think it not too much to claim, perhaps, that the Workingwomen's Club of this city has done something, in this community, to lessen the prejudice against the work of the Bureau ; first among its own membership, and thence in the community at large. We have now a membership of 92, and I think I am safe in promising you that with our standing committee on "Employments and Industries," together with what influence we may be able to exert through our little monthly paper edited by the club, that we may send you this year a tolerably complete showing of the desired facts in regard to the workingwomen of this county.

Trusting you may have an interesting and profitable session, I beg leave to subscribe myself,

Very sincerely yours,

JENNIE McCOWEN,

President Workingwomen's L. A. H. Club.

Kansas.— r. Betton said the Kansas Bureau could not extend its search as he would like, from the fact that appropriate funds were needed. Still, with the blank tem e had been reasonably successful, and should pursue his invest' ions principally through this method. He should take up the ques-

tions similar to those of the Iowa Bureau relative to wage-workers. He should urge the substitution by workingmen of monthly returns for yearly ones, believing them to be more accurate. Should also investigate the subjects of child labor and women wage-workers. Also the extent and influence of building and loan associations.

Connecticut.—Mr. Hotchkiss said his work during the past year had been largely a personal one among laboring men and labor organizations. As a result of this he had found these men and organizations and the Bureau in happy accord. He had procured monthly statements of workingmen based on actual facts. These men, however, had become a good deal discouraged in this, but still the work had been satisfactory. He had found that the reports from the most ignorant were quite as accurate as those of the more learned. These reports have been wonderful eye-openers to him of the laborer's actual condition. Blanks have also been prepared with much care to ascertain how much capital is required for a dollar of profit. None had refused to fill out such blanks. The figures which will appear under this head in the report have been transcribed from the books of the various concerns investigated. This is done by the commissioner or his agents in person. He said he was getting absolute facts regarding capital, profit and credit. Another blank was that of "farm schedule," which includes acreage under cultivation, pasturage, number of horses, sheep, cows, etc. He should also investigate the subject of rents, expenses of living and wages.

Maine.—Mr. Matthews said the Maine Bureau was comparatively new. His first desire had been to enlist the coöperation of working people. In this he had been successful. The small appropriations for the Bureau had necessitated the use of blanks, but he had been pleased with the results. The same line of investigation as to workingmen would be followed the coming year. To this would be added manufacturing industries, women wage-workers, fortnightly payments, compulsory education, effects of the ten hour law, strikes and lockouts and profit sharing.

Minnesota.—Mr. Lamb said his blanks covered the ground of capital invested, amount of production and number of employés. Upon securing figures upon these he was led to believe they were largely valueless, so he gave it up. The subject of workingwomen will form the chief part of the forthcoming report. Personal visits to factories are made and statements received by the commissioner directly from the employés. There will also be a chapter upon coöperative shops.

It was now nearly one o'clock, and the Convention adjourned until two.

AFTERNOON SESSION.

Reports of States continued.

Colorado—Mr. Driscoll said the work of his Bureau would include the following topics: Labor organizations, arbitration strikes, employers' liabilities, wage-working women and convict labor.

Rhode Island.—Mr. Bowditch said that the inquiries made by the Bureau would be chiefly those relating to textile industries. His work was greatly retarded by want of means. The subjects of child labor, agriculture and fisheries would be investigated and discussed.

These reports being concluded, Dr. Brayton, of Indianapolis, read the following paper on

INDUSTRIAL EDUCATION.

BY JAMES H. SMART, LL. D., PRESIDENT OF PERDUE UNIVERSITY.

One of the most important economic problems with which we have to deal is involved in the question, What shall we do with the American boy?

He is, within a few years, to become a tremendously active and effective force that will touch this country in its social, political and industrial relations, and that will in a great measure, mold and form its future. What that future will be depends largely upon the training which this boy now receives.

There are many organized agencies which perform most important parts in the education of the American boy. Among these are the school of the family, the school of the church, the school of civil society and the school of the school-master. What constitutes the proper training in each of these schools is beyond the purpose of this paper to define. Had we time it would be instructive for us to inquire into the enormous wastage that is going on in the process of educating a boy in these schools. How much is wasted, for example, in that enormously expensive machine, the *public school*; how much by incompetent teaching; how much by unimportant and possibly useless subjects of study; how much by extravagant expansion of brick and mortar. After an experience of twenty-five years in public schools, I am sure that I am correct in saying that millions are annually wasted in this manner.

But there is another school into which most of our boys must enter, which we may call the school of their vocation, and it is in this school in which occurs, in my judgment, the greatest waste of all. Let me call your attention to some facts connected with that most important industry, agriculture, an industry upon which all others are based, and without which no others are possible. Of the people in this State less than six hundred thousand live in

our towns and cities, leaving a million and a half in the purely rural districts. These are chiefly dependent upon agriculture for a livelihood. The State has an area of thirty-three thousand square miles—soil enough and good enough, if properly tilled, to support its population and to have four times as much as it uses to sell to its neighbors. Is it doing this or is it likely to do it?

Those who have studied the progress of agriculture in Indiana will tell you that one of its most alarming features is the degeneracy of the soil. In many cases the shrinkage in its productive power has been fully fifty per cent., and in some it is going on at a very rapid rate. This is certainly alarming.

But what is true of this State is true of many others. President Adams, of Cornell, says:

In New York the crop of wheat went down in twenty years from 18 bushels per acre to 10.8 bushels per acre; of corn, from 29.8 to 23. Going to the south, we find that in North Carolina during the last ten years—for there were no figures during the war—the crop of wheat has declined from 8 bushels to 5.9 bushels per acre; corn from 16.4 to 11.5; oats from 12.9 to 8.7. In Georgia the crop of wheat fell from 7.8 to 5.1; corn from 11.1 to 8.7; oats from 10.2 to 9. In Mississippi, wheat from 9.2 to 5; corn from 18.8 to 13.5; oats from 14.5 to 11.5. In Texas, wheat fell from 12.5 to 8.5; corn from 19 to 18.5; oats from 27.2 to 22.8. Coming back to the north and northwest, we find that in Kentucky, from 1864 to 1884, the product of wheat declined from 10.2 to 7.7 bushels per acre; corn from 28.5 to 24; oats from 24.2 to 16.3. In Indiana, wheat from 14.3 to 10.4; corn from 29 to 27. In Illinois, wheat went down from 14.3 to 10, and corn from 38 to 25. It is enough to say that although, as already said, there is not an absolute uniformity of diminution, yet the general diminution is unmistakable. If we take an average of the three years, 1863, '64 and '65, on the other hand, and for the three years, 1882, '83 and '84, on the other, we shall find that in all of the staple crops there has been a very marked diminution of products per acre.

This, I take it, is chiefly the result of soil deterioration.

In addition, there is a still greater wastage that results from misdirected effort in cropping and seeding, in cultivation and in gathering and curing of crops, but worse than all is the enormous destruction of grains, fruits and of domestic animals through disease. Hundreds of millions of dollars are lost in the United States every year by fungus diseases, and hundreds of millions by insect ravages. It is estimated that in the United States the loss from insect ravages alone amounts to three hundred millions of dollars annually. As I have said, these facts are alarming.

We have not far to go to find the cause. It comes chiefly from the fact, I think, that the tendency of modern civilization is such as to educate the boy in the rural districts out of his surroundings and away from his natural occupation—to make him dissatisfied and restless with his environment and to fill him with a desire to move out and to move off. And he does move out and move off.

One of the most important and economic problems of the day arises from the fact that there is a steady and increasing migration of young people from rural districts to the cities and towns. While I do not know that the world is growing worse, I know that in many parts of this country the ranks of non-producing classes and of the destructives are rapidly increasing and that the producing classes in the rural districts are comparatively decreasing. I know that the flaming headlines and the brilliant footlights, that the glare and glamour and pyrotechnics of our city life are enticing young men, and young women too, from their rural surroundings. Then, too, the best and smartest of the farmer boys are often educated into the professions or are sent to the business centers to engage in various forms of employment. The result of this is that in some parts of the country the farms are growing larger and we have agricultural landlords and farmer tenants, while on the smaller farms the place of the boy is taken by the agricultural tramp. Close farming will never be done under the landlord and tenant system. The best results will be secured by small owners who, with their sons and daughters, have an interest in the soil and a taste for the business. One of the greatest industrial problems of to-day is involved in this question, "How shall we keep our sons and daughters out of the whirl and rush of city life and in the pure free air of our rural life; how shall we keep them in the ranks of the great producing classes, and out of the ranks of the non-producing and of the destructive classes?" This must be done by proper education. The newspapers must help, the school master in the rural districts must help, the agricultural journals must help, the State, by wise legislation, must help, and above all, the farmer himself must help. In his treatment and training of the boy at home, he must remember that he lives in a new world, and that the world is not only new but that it is very much larger than it used to be. Within the past few years the daily newspapers, the railroads and the electric telegraph have come in and they have created a tremendous revolution. The boy of to-day is a new boy and unless he has very careful treatment he will move out. The father was a farmer because he had to be, but the son will become a farmer, not because he has to be, but because he wishes to be. The boy will never take the thing in, in the same hard way in which the father took it in. Existing conditions make it impossible.

There has been an impression that science and farming have nothing in common, and that the scientific farmer was an expensive curiosity. It may be true that Horace Greeley's potatoes cost him sixty cents apiece, and that much of our academic training has had a tendency to draw young men away from agricultural pursuits—but science, and especially agricultural science, has made such gigantic strides in the last few years that agriculture has

almost become a profession, requiring as much skill and sense as it does to become a first-rate lawyer, or a first-rate physician.

Science teaches us that nature will not be cheated. It teaches us that we cannot expect the soil to respond with a continued harvest if it is subjected to constant robbery. It teaches that taking money out of the soil and putting it into a bank may make rich fathers, but that it will be likely to make poor sons, and that the safest bank of deposit for a farmer is his farm.

Now we may not be able to make two blades of grass grow where one grew before, but it is possible to stop this enormous wastage, and to largely increase the annual yield of agricultural products, and to improve their quality.

I may be pardoned if I say that the American Agricultural College will play an important part in the scheme of regeneration. This is an age of fierce competition, and every man must enter the race fully armed and equipped for his work. I need not point these statements by proof. With what a keen eye must the market be watched and the movements of the bulls and the bears. One must know the difference between an honest deal and a dishonest corner. He must watch the great commercial movements. He must not only watch the rain cloud over his own head, but he must know that it is only by watching the climatic influences all over the world that he can tell when to sell and when to hold. He must of necessity understand political economy; the laws of production, the relation of capital and labor, of supply and demand, the laws of consumption, of distribution and of exchange.

The Agricultural College cannot directly educate all of the farmers in a State. What it can do, and ought to do, is this: It can send out a dozen men into each county of the State in which it is located, well informed, well disciplined, capable of applying the very best methods of farming in the most practical and economic way, and who will, by example as well as by precept, show the better methods.

I now call your attention to another branch of industry into which men have to be educated, and in which the wastage is more strongly apparent, than in the one of which I have already spoken.

The difficulties which confront the American boy who wishes to learn a trade are many. He can find employment in a shop or factory in which he may perform rude labor, or in which he may acquire skill in certain hand manipulations, or in which he may become an automatic attachment to a machine. But builders, manufacturers and superintendents are not found now-a-days who are willing to spend time to teach a boy the various steps or processes necessary in the acquisition of a trade. In many of the lines of

manufacture, if not in most, competition is so strong and the division of labor has become so necessary, that manufacturers cannot afford to do this. Indeed no one now wants a pin maker, but it is the skillful one-sixtieth part of a pin maker that finds employment; in other words a part of a machine.

The old fashioned and somewhat effective apprentice system has gone and nothing adequate to the demand has come to take its place. There is a process by which a boy may learn a trade but at what a loss of time, money and sometimes of morals. Let us see if this cannot be made apparent.

Suppose a boy enters a printing office, for example, in which he expects, and is expected to learn the trade in all its parts. The process is a tedious one. I once had occasion to frequent a printing office in which were employed seven boys. The proprietor informed me that it would take at least three years before they could become journeymen—they were to receive an average of thirty cents a day for the three years. I found that the boys, although very busy, were spending their time in *not* learning the trade, and, so far as I could learn from inquiry and observation, no attempt was made to give them any systematic instruction in it. They were engaged for the most part in labor, but were permitted to *pick up*, as the proprietor expressed it, as they had opportunity. Now, this “picking up” process, while it is possibly profitable for the employer, is not the most profitable method for the boys. It results in four things:

It results, in the first place, in a waste of time. This is bad enough, but something else occurs that affects the character of the boy's work. The “picking up” process will seldom produce expert workmen. Need I call your attention to the fact that the country is full of men who pretend to be carpenters and who are not, men who pretend to be machinists and who are not, men who pretend to be pattern makers and moulders and blacksmiths and shoemakers and tailors and printers, who are shabby, incapable workmen at best? Who that has built a house does not know this? There is not a manufacturer in this country that does not know it and to his cost, and one of the most difficult things that a manufacturer has to do is to sift out the few really good workmen from those who pretend to know how and do not. The engines that will not work, the machines that wear out, the houses that are shabbily constructed, and the fabrics that fall to pieces will attest the truth of what I say. How many workmen are there that take God's bounty and by careful, skillful, intelligent processes make the most of it? Here is a waste surely. But who could expect better results from a process so full of mischief.

Another result of the “picking up” process comes from the fact that it fails to awaken in the boy a keen ambition, without which success in any

employment is seldom secured, hence it is that many boys who enter factories and shops for the purpose of learning a trade, become restless, tired and discouraged and leave the business to possibly try another and thus become the good-for-nothing jack-of-all-trades, or to join the ranks of the non-productives and possibly the ranks of the destructives.

The "picking up" process has a moral aspect which has wastage in it. Every handicraft carried to a high degree of excellence may become a fine art and with no loss of time. There is no dignity in labor, but dignity may be put into labor. When a man does something that is fine of its kind, whatever the kind may be, it awakens sentiment in respect to the products of even the commonest handicrafts. The very best citizen and the most valuable man is he who takes God's bounty and produces something of high value out of it and who takes pride in what he has wrought.

While book knowledge is of great value, the education which comes from a thorough knowledge of one's vocation, has also a high disciplinary and economic value.

In certain important trades in which the processes are few, the bricklayers' trade, for example, more satisfactory results are secured to those who are permitted to enter them as apprentices, but through the operations of the Trades Unions, the avenues to the trades to which I refer are not open to the many.

The results of the abolition of the old apprentice system have been observed in England and in France, as well as in America. I quote from a thoughtful article on this subject recently written by Prof. Sylvanus Thompson, an eminent English physicist:

Apprenticeship, with its wholesome rules, having decayed in everything but form, the lads who enter the shops are never properly instructed, but are made the drudges of the older workmen. What wonder that they acquire habits of idleness and carelessness that not only pursue them through the whole of their work, but, worse than this, corrupt and undermine their morals? What wonder that their manipulation is but half acquired, or that the methods and devices they learn to apply are those of half a century ago; ancient relics of prejudice and unscientific "rules of thumb," handed down by the tradition of the shops, a veritable survivor of the unfittest?

Mr. George Howells, in a very able paper on this subject, speaks as follows:

But a change was coming o'er the spirit of the dream; another day was drawing fraught with still greater issues to the journeymen, for, instead of the old system of master and craftsman, there grew up quite another kind of mastership and of hiring. The master had already begun to be less the craftsman and more the employer. Instead of the old fealty between master and men there came estrangement more and more, until sometimes the work people scarcely ever saw their veritable employer. Under these circumstances the conditions of apprenticeship were completely changed,

not suddenly, but gradually, until the apprenticeship became merely the boy worker, with less wages, but more solemn engagements, than a journeyman. The master to whom he was bound no longer taught him the trade; he was, so to speak, pitchforked into the workshop to pick up his trade as best he could, or to learn it from the many journeymen who were there employed. It was no one's duty to teach him; there was no pay and no responsibility.

Prof. Thompson, in summarizing the results of the new system, speaks as follows:

At the present moment, this tendency to despise a life of honorable manual toil, in straining after a supposed gentility, would be truly pitiable, if the proportions it has attained did not awaken more serious apprehensions. It is an evil not confined to this country alone, but it is known, too, in the great cities of the States, of Germany and of France.

Since I speak to a convention of statisticians, I suppose I ought to give you a tabular statement or two. Some months ago I sent out circulars to employers, in some of the industries and in various parts of the country, asking the following questions:

1. What is the average number of persons that you employ who come to you for the purpose of learning the trade?
2. How many of these remain with you long enough to become journeymen?
3. Of those who become journeymen, how many succeed in becoming first-class workmen?

These were sent to (1) carpenters and joiners, (2) pattern-makers, (3) molders, (4) blacksmiths and (5) machinists. From the replies received, and they were numerous, I formulated the following conclusions:

1. That out of every ten who enter a carpenter shop with the intention of learning the trade, four abandon the business; of ten pattern-makers, two; of ten blacksmiths, six; of ten moulders, five; of ten machinists, six.

2. Of those who pursue the business and become professed journeymen, but three become first-class workmen; of ten pattern-makers, but two; of ten blacksmiths, two and a half; of ten machinists, three and a half.

We can thus construct the following interesting table, which shows the number of boys out of every hundred who enter each trade mentioned who become first-class workmen, viz.:

Carpenters.....	18
Pattern-makers.....	16
Blacksmiths.....	10
Moulders.....	17
Machinists.....	14

Being an average of fifteen to each one hundred.

Thus it is that the very process we take to educate a boy into the various handicrafts is the process by which we educate him out of them. It has

been claimed by many that the public schools were largely at fault in this matter.

I again quote from Prof. Thompson, as follows:

In all the constructive trades the greater part of a workman's instructions are given to him in the form of working drawings. Yet we suffer the budding artisan to pass through the schools ignorant of the first rudiments of a science that is as essential to his work as are the four rules of arithmetic. And ought we, then, to be surprised if, in pursuance of the system we have deliberately marked out for the rising generation, we keep our future artisans, till they are fifteen or sixteen, employed in no other work than sitting at a desk to follow, pen in hand, the literary course of studies of our educational code, we discover that on arriving at that age they have lost the taste for manual work, and prefer to starve on a threadbare pittance as clerks or book-keepers rather than by the less exacting and more remunerative labor of their hands?

And again:

The taste for manual work is imbibed at a very early age, and there is not wanting evidence to prove most distinctly that even a very small amount of manual labor introduced into the elementary school serves to keep alive the capacity for active employment and the manipulative skill of the fingers.

While I am not prepared to say that our schools ought to be turned into workshops, or that shop practice should become an integral part of our school system, I am prepared to say that those who make the courses of study in our schools often forget that the great majority of their pupils must earn their living by manual labor. I am prepared to say also that if every considerable city and town in the country could establish a special manual training school for its boys and its girls, much of the evil of which I speak would disappear.

It remains for me to answer this question: What is the result of the experiments that have already been made? I know of no better way of answering this question than by telling you what has been accomplished in the mechanical department of the institution with which I am connected.

It is the purpose of our school of mechanical engineering to afford young men an opportunity to acquire a good collegiate education in mathematics, science, literature and art, and at the same time to secure instruction and practice in such lines of work as will fit them to engage in the practical industries of life.

The student has his four years' instruction in geometry, trigonometry, analytics, calculus, physics, chemistry, English literature, history, psychology, political economy and in modern languages. In addition to this he spends two hours a day for a period of two years in carpentry, wood-turning, pattern-making, molding, blacksmithing and in machine work.

The usual methods of text-book study, recitation and lecture are employed, but the student is required to put into practice, so far as possible, the instruc-

tion which he receives. He, for example, not only receives instruction in regard to the theory and principles of drawing, pattern-making and machine instruction, but he is required to make working drawings himself, to construct patterns, to make the castings in the foundry, to finish and set up the machine and to operate it when it is completed. This combination of the theoretical and the practical, characterizes the institution.

During the last two years of his course he spends two hours per day in making plans and designs for machinery, in testing building material, in boiler and engine tests, in dinamometric tests of power and in advanced experimental engineering, but it is of the work of the first two years of which I wish to speak chiefly.

Now, the average boy will spend three years in learning the carpenter's trade, three years in learning the blacksmith's trade, three in learning pattern-making, three in the foundry and three in learning to become a machinist. It will doubtless take the average boy ten years at ten hours a day by the ordinary faulty methods, which I have tried to describe to you, to master these five trades. Experience shows that 95 per cent. of our boys can produce superior results in all these departments of labor by working two hours a day for the first two years of his college course.

[The President here exhibited a large number of specimens of joinery, pattern-making, castings, forgings, and of machine work, which were closely examined by all present and pronounced remarkably fine specimens of work. Indeed, this examination proved one of the most delightful features of the Convention, and deeply impressed all with the great benefits arising from this line of education.]

Continuing, President Smart said:

You ask, how is this accomplished? In the first place the boy is instructed in the theory of work; he is taught in respect to the use of tools; he is set to work to do the thing himself under competent instructors; no attempt is made to make money out of him. So soon as he learns to do one thing well, he is immediately set to work on another, involving a higher degree of skill. His ambition is aroused because he discovers that he can very soon learn to do a fine thing. Since he has learned to make and use working drawings there is an accuracy and a precision about every movement that he makes, and all these things bring the desired result about easily and satisfactorily.

You ask if what they have made has been put to any practical use. Yes, our boys have made many machines that are now in use in our shops, and have furnished other technical schools with similar appliances. While they spend much of their time at first in doing work which may be called practice work,

it is intended that all may have a hand in making some machine that is put to a practical test.

[Here President Smart exhibited pictures of a stationary engine, cupola furnace, Purdue forge and a section engine. The stationary engine works as perfectly as any engine ever used—indeed it is more perfectly finished than most of the engines on our market. The Purdue forge has been in use three years. The cupola furnace has been in use in the college foundry for three years and does its work admirably.]

The drawings and patterns of all these were made by Purdue boys. They were set up and finished by them, and have been constantly used by them.

It is by this process that the boy sees that what he does means something, and every freshman understands that what he is now doing may become a part of a useful instrument. I may say that two years ago our boys made and sold thirteen Purdue forges and they are now in use in the Alabama Training School.

Our students manufactured a section engine which shows, in an ingenious way, the construction and operation of an ordinary slide valve machine. It was made from a roll of paper for the design, some pine boards for the patterns and some pig iron for the machine itself; that is, it was designed and made out of the raw material in our shops. If you want to see boys interested in their work you must watch them about the time the various pieces upon which they have been working are brought together and set up into a living, breathing, moving piece of machinery.

Some of you will ask, is it your purpose to make carpenters and blacksmiths? I answer, this is our incidental but not our final purpose. Our purpose is to teach the principles that underlie all the constructive trades and to fit the boy to become a designer of machines, a master of construction; in other words, a mechanical engineer. We hold that a mechanical engineer should himself be a good mechanic. I may add that we hold also that a civil engineer should be a good mechanic. Those who wish to become expert mechanics merely remain with us two years, while those who wish to become mechanical engineers remain four.

Question. What per cent. of your boys become expert workmen?

President Smart. Over 90 per cent.; as large, if not larger, than in any other department of our work.

Ques. How do the boys who take instructions in mechanics stand in their academic work.

Pres. Smart. They generally stand very high, and there is a reason for it. When boys do a fine thing in one direction, they are likely to do a fine thing in another. Then again, when boys have to put two solid hours into hard work in the shops, they are prepared to go to their rooms and sit down and study, and with a freshness that enables

them to accomplish a great deal in a short time. I think I can say that the average boy who spends two hours in the shops can do more with a given number of academic studies than a boy who does not. Thus we see that whatever is obtained from shop practice *is more than clear gain*.

Ques. Why do you give instruction in wood and iron and with no other material, brick and leather, for example?

Pres. Smart. We give instruction in the use of wood and iron because a larger number of constructive trades are based upon wood and iron than upon all other materials combined.

Ques. Is not your work objectionable on the ground that your graduates will enter into competition with workmen who are now already in the field?

Pres. Smart. Is it possible that there is a man in this country who is afraid of the competition of his own child? If there is such a one I think I can give him a good answer. My answer is this: The meanest form of competition which a good workman has to contend with is the competition that comes from a man who has spent little or no time in learning his business, and who, therefore, produces an inferior job at a lower price. This is the only form of competition which a good workman need fear. If a man does as good a job of work as you do, he will charge a fair price for it. This is not the competition that has evil in it; indeed it is, in a sense, a coöperation; at all events it is a good thing, a healthful thing.

We are trying by our work at Purdue to prevent the destructive competition, and we think we are succeeding satisfactorily. Our graduates receive good salaries, and I am sure that does not have a tendency to lower the wages of other good workmen. We think it is good for the boys to be with us, and a good thing for every one else.

Many other questions were asked President Smart by the Commissioners, all of which elicited replies which only served to prove the efficient methods and beneficent results of industrial training and education.

At the conclusion of the discussion on President Smart's paper Prof. Arthur Woodford, of the Indiana State University, was introduced, and spoke as follows:

MR. PRESIDENT AND GENTLEMEN OF THE CONVENTION,—I desire to call your attention for a few minutes to some figures which I have recently collected with the assistance of Mr. Buskirk, a member of the senior class in the Indiana University, concerning Mr. George's scheme of taxation. I have attempted a comparison of two sections of three squares each, in different parts of the city of Bloomington, Indiana, a county town in the south-central part of the State. Section I is in the poorer, and Section II in the better, residential portion of the city; I is along the creek or "branch," and II is on the avenue.

The assessments and taxes for last year, as shown by the treasurer's duplicate, were as follows:

		II	Total.
Land.....	\$3,400	\$11,000	\$275,000
Improvements.....	8,000	81,000	515,000
Personal.....	2,600	88,000	780,000
Total.....	\$14,000	\$180,000	\$1,520,000
Taxes for 1887.....	850	8,250	† 88,000

As nearly as I am at present able to determine it, the *rent* on the two sections are \$780 and \$1,800 respectively. The most favorable estimate I can justly make is as follows :

	I		[II]
I. Assessments (1).....	\$11,400	\$42,000	\$21,000
II. Present cost of improvement (2).....	16,000	60,000	80,000
III. House rent (3).....	1,840	5,100	8,600
IV. Rate per cent. on cost.....	11½	8½	12
V. Taxes, repairs, etc.....	{ 285 80	{ 1,050 300	{ 525 150
VI. Net return to owner.....	1,475	3,750	2,925
VII. Rate per cent. on cost.....	9 1-5	6 1-4	9 3-4
VIII. Valuation (4).....	25,000	90,000	48,000
IX. Rate per cent. on valuation.....	5.9	4 1-8 (5)	6
X. Six per cent. on cost of improvement.....	960	3,600	1 800
XI. Return on land, <i>rent</i>	525	150	1,125
XII. Taxes (to be removed).....	285	.....	1,050
XIII. Total.....	810	.....	2,175
XIV. Grand total.....	.....	2,985	.....
XV. Present taxes.....	.....	8,600	.....

1. On land and improvements as given above.
2. Easily obtained for Section I on account of the uniformity of the houses, which are mostly of "frame," contain from three to five rooms, and are very similar to others now being built in the town *under* contract, but for Section II is only my own estimate and probably very low.
3. Again easily obtained for I, where three-fourths of the houses are "rented," but simply an estimate concerning II, where only two houses and part of another are "rented."

†Aside from poll, pike and dog taxes.

4. Based on recent sales and statements of present owners ready to sell.

5. This shows a poor investment and makes clear the position that the whole purpose of the increase of taxes on land values is to augment the incentives to make the best use of land, it may be of all "natural agents." The object is even to force, by governmental agencies, a better application of labor and capital to land. This better application for Section II would require only about \$30,000 to yield the largest net return. We have, then, economic rent shown in line XI by subtracting X from VI.

I. We must conclude that rent—the income from ownership, or price paid for the use of a natural monopoly—"ground rent" on land used for residential purposes in the town of Bloomington would be entirely insufficient to meet the expenses of the city government and pay the share of the county and state taxes, provided these remained at their present amount.

II. From these figures it also seems clear that such a redistribution of tax burdens would hardly *abolish* poverty. Indeed, one is disposed to infer from the increase in the amount actually paid in Section I, that the cost of living of those who live along the creek would be increased and brought nearer what Mr. Simpelaar has called the bread line, while living on the avenue is made easier.

I shall hope at another time and with a wider basis for calculation to extend this analysis of what is popularly known as the George scheme of taxation.

A general discussion followed this paper, participated in by Messrs. Bemis, Flower, Hutchins, Fassett, Betton, Lamb, Barnes and Driscoll, some at variance with the views of the author, and others in harmony therewith.

[A few days after reaching home the postmaster at Indianapolis informed me that a registered letter was in that office awaiting my orders. A few days elapsed and I received it, and it proved to be from Mr. Powderly, whom the Convention all hoped to meet. It was as follows.—SECRETARY.]

SCRANTON, PA., May 19, 1888.

E. R. Hutchins, Esq., Secretary.

DEAR SIR,—Up to this moment I was in hopes that I would be permitted to take a part in the deliberations of the Sixth National Convention of Chiefs and Commissioners. At the last moment I am doomed to disappointment, and will write a paper on Industrial Schools, basing it upon a paragraph which I find in to-day's paper.

I need hardly say that I wish for your meeting the fullest measure of success. In the hope that your deliberations may prove eminently satisfactory, and regretting that I cannot have the pleasure of participating in them, I remain, with kind wishes,

Very truly yours,

T. V. POWDERLY.

The following is the paper:

SETTLE THE APPRENTICESHIP QUESTION BY INAUGURATING INDUSTRIAL SCHOOLS.

BY T. V. POWDERLY, ESQ., OF SCRANTON, PENN.

From the paper before me I take the following paragraph. It appears to furnish food for reflection and study.

A very serious question confronts the American youth under the existing restrictive system of apprenticeship. What is to become of the millions of boys, who, having finished going to school, are looking about for something to do?

This subject is worthy of the best thought of the most profound thinkers of our time, and I make bold to discuss it briefly, in the hope that my words which at best will serve but as an introduction, may cause others to take up the question itself for discussion.

Have we a restrictive system of apprenticeship in the United States? I fail to find it in operation in many of the trades and callings, and in many others it exists only in name. Its effect on limiting the number of apprentices is scarcely felt in the trade. It is frequently urged that the restrictive system of apprenticeship is driving the American youth from the skilled callings; that the native born is being driven from the workshop to make room for the workmen of foreign birth. It is held by many that the trade union is to blame for this state of affairs; that the American labor organization is inimical to the interests of the American workman. When the mechanic worked steadily for the six days in the week to perform a certain amount of work by hand it was necessary for him to know the use of tools; in order to fit himself for the performance of such a task he had to bind himself to the employer for a term of years, during which time he was taught the rudiments of his trade. He worked for a pittance in the hope of one day being able to take his place at the bench as a journeyman. It made no difference whether he learned the machinist, blacksmith, molding, cooper or shoemaking trade, they were all hard to acquire, and the mechanic of twenty or fifteen years ago had to learn the whole trade in order to take his proper place by the side of other mechanics when out of his time and upon the road as a journeyman. At present it is a waste of time to bind a boy to any of these trades, or to any particular trade, for the reason that they are all subdivided to such an extent that men are set to work on special pieces on entering the workshop, and remain in that particular subdivision during their term of service. The chief aim of the employer in engaging apprentices is to secure the assistance of cheap help on work that it is not necessary to employ competent mechanics to perform. The opposition of the mechanic to a number of apprentices is that the market may not find too many craftsmen in search of employment; under such conditions wages must have a downward tendency. An apprentice

in 1888 does not enter upon the trade as the apprentice of 1858 did. In 1858 the apprentice learned all of the "arts and mysteries" of the trade, while the beginner of to-day is placed at a machine and is apt to be kept at it during his entire term of apprenticeship. If he is skillful, and manipulates that machine to good advantage, he is more likely to be of better service to his employer than if he were allowed to take turns at all of the different branches of the trade, but when his term expires he is of but little use as a mechanic, for should he apply to another employer for a situation he may not be lucky enough to find employment at a machine similar to the one at which he served his term, and if he is not so employed he will have to wait until a vacancy occurs, or tramp. During the period from 1859 to 1875 trades unionism flourished more than at any other time in our history; it was during that period that the greatest opposition to an unlimited number of apprentices was manifested by the mechanics of the United States. During that same period the employers of labor learned to go to foreign lands to secure the services of mechanics who would engage to take the places of the American workmen. The employer was not forced to go abroad for workmen, but he regarded the trade society as a foreign institution, and would not recognize it in dealing with his employés. He was inconsistent, however, in going to Europe for workmen who were none the less foreign because he imported them.

During the past ten years, which may justly be styled the decade of the iron man, the importation of foreign workmen by employers was practiced on a most extensive scale. During this same period trades unionism languished in the United States and played but a small part in dictating to employers how many apprentices they should engage; yet employers imported foreign laborers in such numbers as to arouse the American workmen to a sense of danger, when they began to rebuild their shattered organizations, in which work they were encouraged by the Knights of Labor, the latter organization having secured the passage of a law which, although frequently violated by employers, has for its object the prohibition of the importation of foreign labor under contract. The argument that trades unionism is to blame for the presence of so many foreign born mechanics in our workshops is not worthy of consideration. The truth plainly stated is, that every foreigner who is to-day at work in the workshops of the United States is here because he believed he could improve his condition by coming, or is here because he was induced to come by some agent, or bureau, in the interest of the employers of labor in the United States.

It is neither profitable nor encouraging to learn a trade when the chances are that some morning the mechanic will awake to find a machine standing in his place doing the work which he performed the day before. Inventions

have been introduced so rapidly and extensively during the last ten years that many trades have been almost revolutionized. This rapid introduction of machinery has had a tendency to depress wages; the reduction in wages and the lack of security in workshop management has been the cause of sending many a boy to college who would have gone into the workshop after passing through the routine of the common public school.

Americans believe that they live in the best country in the world; the workman being imbued with that sentiment believes that he should receive the best wages in the world. The employer, who may be as proud of his country as the workman, when it comes to a question of employing an American because he is a countryman, or securing the services of cheap workmen, will cast his lot with the foreign workman and the dollars-and-cents side of the question. The foreign workman, not knowing what his services ought to bring in this land, will step in the shoes of the American workman who received from \$2.50 to \$3.00 a day, and be recompensed at a rate not exceeding \$1.50 or \$1.75 a day. Having lived where it was necessary to practice the most rigid economy, he brings his economical habits and ideas with him, and for a time he can exist on the wages paid to him.

We also find the manufactories of the United States being operated as though they were the property of one management. The tendency is to bring them under one common head through the agency of the "trust." Independence on the part of the workman is being crushed out, for he has only to work in one mill, workshop or factory in one part of the country and he becomes known all over. This system, although in its infancy, bids fair to become so perfected that it will be impossible for a man to work in any part of the country if his last employer is dissatisfied with him. The tendency throughout for the past few years has been to discourage the American youth when he sought to learn a trade. He is unwilling to spend years in acquiring knowledge which may never be of service to him. The colleges and universities are full to overflowing, and soon the professions will be as crowded as the trades are to-day.

This is an age of revolution and evolution. It is the most marvelous age the world has ever witnessed, and nothing that has gone before can be compared to it, or cited as an indication of what is to follow. We cannot with any degree of accuracy predict anything for the future; we grope and fear to risk too much, lest some new invention completely upsets all our plans and gives the winning hand to another. We find American youths unwilling to learn trades because they do not bring rich rewards or assurances of stability of employment. There is a fascination about the large cities which they did not bear some years ago, and, taking it altogether, we find ourselves in a state of transition

almost impossible to describe. What the man of ante bellum days regarded as a luxury is to-day an absolute necessity. Take a look at the room in which you sit when this is read and contrast it with what your surroundings would have been in 1858, just thirty years ago; note the changes which time has worked, not alone in the appearance of the room, but in that of its occupants. Once we put a little oil in a saucer, hung a rag over the edge, struck the flints together and ignited the rag. With such a light our reading and sewing was done. Then we ran the tallow into the mould and made the candle; we next ran the fluid into the lamp, and stood back in awe to see it burn; after that gas began to work its way beneath our sidewalks and into our sitting rooms; then the old Drake farm was tapped, and the world was astounded to find itself burning the product of the earth after the refiner changed its color. Then we said, we can go no farther, and found our words were contradicted by a glare of light which almost rivalled the noonday sun, and electricity flashed itself into favor. [On the 9th of this month at 11 o'clock at night I saw a man painting a sign on Chestnut street, Philadelphia, without the aid of lamp or torch; electricity answered every purpose.]

Ten short years ago we wrote our letter, or, if we were in a hurry, we telegraphed to our friends; to-day we call up the exchange and talk across cities and counties. Soon States will be traversed by the sound of the human voice. To-day we talk into a funnel, and not only are the words recorded, but the very sound and quiver of the voice is faithfully preserved to be repeated as often as may be required at any time during our lives or after death. We stop and ask, What next? The answer comes with the rapidity of lighting from some quarter of the universe in the shape of a new invention. What has this to do with the American youth? Everything, for we must devote more time to him than heretofore, so that he may not, Micawber-like, stand in idleness waiting for something to turn up. Let us turn it up for him by inaugurating a system of industrial schools in which the arts, the sciences and trades will be taught. Surely the American youth is worthy of the best that we can do for him, and we should encourage him in his first steps that his later ones may be for the good of the nation. At the rate at which science is advancing there will soon be no shoveling of earth, no leveling of hills by hand, no digging of trenches, no cutting of earth, or wood, or iron by hand; all of these things, and all else that enters into the industry of the world, will be done by the aid of science. There will be no trades or tradesmen of any special callings or crafts. In the world's production nothing should be missing, nor should one man have an advantage over another which nature does not give him. We will have men of no particular trades, but all men will know all crafts, not the "Jack of all

trades," but a far different being who knows all trades well. Every school room should be a workshop, a laboratory, and an art gallery. At present a trade learned is a trade lost, for the learner does not have an opportunity to practice but one part of his calling, and if thrown out of that one groove cannot fall into another. Under an industrial system of schooling every American youth will know sufficient of all trades to step into whatever opens itself to him, and he will not be forced by circumstances to stand in the way of another who is anxious to rise, but will be fitted to take a step forward at a moment's notice. He will always find work to do and will do it more rapidly, with better tools and for a greater reward than the artisan of the present. The unsettled conditions which now make trades unionism a necessity will vanish, and in that age there will be but one organization necessary, the fatherhood of God and the brotherhood of man.

REPORTS OF COMMITTEES AND RESOLUTIONS.

Mr. Fassett, chairman of the committee on Mr. Atkinson's paper, presented the following resolution, which was adopted:

Resolved, That the Commissioners of Labor are grateful to Mr. Atkinson for his suggestions, and will undertake to collect wage statistics relating to the textile and iron industries by a system of uniform blanks, to be prepared by a committee of three, who shall be appointed by the chairman of this association of Commissioners, of which he shall be chairman, and to be used by the several Commissioners so far as practicable.

A. D. FASSETT.

ALBERT S. BOLLES.

JAMES BISHOP.

Mr. Lamb submitted the following supplemental report upon the same subject:

According to Mr. Atkinson's diagram, the purchasing power of a day's wages has increased as follows, from 1860 to 1885:

Foremen, overseers and mechanics of special skill, from 2,374 parts to 4,000 parts, 68.4 %.

Machinists, engineers, blacksmiths, carpenters and painters, from 1,512 parts to 2,400 parts, 58.7 %.

Operators in factories, workshops, tanneries, rolling mills, etc., from 1,290 parts to 1,800 parts, 39.5 %.

Laborers, 980 to 1,400 parts, 42.8 %.

It would appear from this, that while the purchasing power of a day's wages has increased in nearly all departments of labor, that the greatest increase has been in the higher departments. The income of capital has decreased wherever it has been exposed to the full stress of competition, as in

the case with most of our lesser establishments, both in manufacturing and distributive industries, but this decrease has not, in my judgment, been quite as great as the diagram would seem to indicate, owing to the fact that the calculations are based upon the rates of discount in Boston, New York and Chicago. In 1860, and possibly as late as 1870, the rate in Chicago might properly be said to represent a fair average of the rates in the west; but, since then, the center of population has moved westward, making Chicago more properly a central city than a western one. I think that a somewhat more accurate idea of the true situation would have been secured by taking the rates in St. Paul, Minneapolis, Omaha and Kansas City and averaging with New York and Boston. No 5 % money can be had in Minneapolis.

Mr. Atkinson attributes the increased purchasing power of a day's wages mainly to specie resumption, and cheapened means of transportation. Both of these do, no doubt, materially contribute to the result; but I do not see how Mr. Atkinson could have overlooked that equally important factor, improvements in machinery, and increased facilities of production.

Mr. Atkinson suggests the selection of typical establishments for the purposes of a general investigation by the State Bureaus, with a view to determining a law of wages and profits. The class of establishments which he suggests are such as have been running for a long number of years with but slight interruptions, and have never been bankrupt, but have been uniformly profitable to their owners.

"In these establishments," he says, "the workmen of various classes will have been employed under what may be called strictly normal conditions."

I am forced to differ with Mr. Atkinson in that view of the case. Such establishments being the exception, and not the rule, their condition furnishes no fair idea of the average; and, therefore, I think it would be more proper to say that they were working under conditions that are entirely abnormal, and any deductions made from statistics collected exclusively in such establishments would be useless as data from which to determine a general law of wages and profits.

Mr. Bolles offered the following resolution, which was adopted:

Resolved, That the Secretary be requested to correspond with the American Economic Association for the purpose of having its Convention held next year at the same time and place as the Convention of the Labor Commissioners, and also of holding, if possible, joint evening conferences.

Mr. Lamb, chairman of the committee to whom was referred the paper of Mr. Folwell, reported as follows:

Your committee to whom was referred the paper presented by Prof. Folwell beg

leave to report that, in their opinion, the subject is of such magnitude and importance that it would be inexpedient at this time to take any definite action, and recommend that it be placed on file*and the subject commended to the careful study of the members of the Convention.

JOHN LAMB,
SAMUEL M. HOTCHKISS.

Mr. Bishop offered the following:

Resolved, That the members of this Convention hereby extend their earnest thanks to Mr. Wm. A. Peelle, Jr., Chief of the Indiana Bureau of Statistics, for the splendid quarters he secured for holding the Convention, and for his kind attention paid to the members during their stay at Indianapolis.

Adopted.

Mr. Matthews offered the following:

Resolved, That the hearty thanks of this Convention are hereby tendered Mr. Flower, of Wisconsin, and Mr. Hutchins, of Iowa, for the faithful discharge of their duties as President and Secretary of this body.

Adopted.

Mr. Hutchins offered the following:

Resolved, That the future meetings of this Convention shall extend through at least three days.

Adopted.

Mr. Simpelaar moved that there be an interchange of blanks between the various Bureaus, and that this be done immediately upon the return of the Commissioners to their homes.

Carried.

Mr. Hutchins stated that as Secretary he had invited Mr. Bolles to prepare a paper for this Convention, and that since he had arrived in Indianapolis Mr. Bolles had told him he had written to him answering the request affirmatively. As the reply had not been received, he moved that the paper of Mr. Bolles be published in the proceedings. The motion was carried unanimously.

[A portion of this admirable paper has been omitted, but the larger part published, and is as follows:]

SOME MORAL AND ECONOMIC CONSEQUENCES OF USING LABOR- SAVING MACHINERY.

A greater change has been wrought in the moral, social and industrial condition of mankind by using labor-saving machinery than by using gunpowder or in enjoying the largest political liberty. This change cannot be measured by money and prices; nor can a comparison, however minute, of the more complete satisfaction of the wants of the ordinary citizen of our time, with

the less complete satisfaction of the wants of his ancestor, convey a true idea of the change. Such a measuring or comparison pertains to the material, to the outward and visible, revealing nothing of the moral and social changes wherever labor-saving machinery has been used.

Before describing the consequences of using such machinery, an example or two may be given to illustrate the saving in labor which has thus been wrought.

One person in a cotton mill will annually spin and weave cotton cloth enough for 250 persons, and in a woolen mill, for 50 more. One person with a hand loom could weave from 42 to 48 yards daily; with six power looms his product is increased to 1,500. One person in a man's boot factory will annually make 1,600 pairs of boots or shoes, and in a woman's shoe factory, 3,000 pairs. One man with a cotton gin can do the work of 999 men by hand in removing seed from cotton. One man in Dakota can annually produce 5,500 bushels of wheat, and retaining 1,000 bushels for seed, the remainder, by labor equivalent to that of one man for one year, can be manufactured into flour and put into barrels. The 4,500 bushels will make 1,000 barrels, which can be transported to New York by rail by two men during the same period. Moreover, the four thus engaged would have time left to keep the machinery of the farm, the mill and the railroad in repair. Three more in a year could bake this quantity into bread; and as the annual ration for a person is a barrel of flour, the farm hand, the miller, the two carriers and the three bakers could supply a thousand persons with bread.

Notwithstanding the magnitude of these economics, they shrink into insignificance in many regards when compared with those wrought by the steam engine. The tramp can carry all his possessions on his back or in his pocket; but imagine, if you can, the possibility of carrying by animals all the grain raised in the west that is now carried to the seaboard by railroads.

What a marvelous change is that simple device, the elevator, making in the architecture and social life of our cities! A new Rome has been built above the ancient, but the two cities are cleft by a stratum of ruin, the mute story of violence, decay and retrogression. The elevator is doubling the capacity of the land for building purposes; economizing time by thus compacting city residents and intensifying their energies.

Without attempting to describe the extent of the use of labor-saving devices, we shall describe some of the consequences of using them.

The first consequence is, that persons are deprived of employment. The second is, that the farmer or manufacturer, without lessening the laborer's reward, can sell his products at a lower price. By diminishing the cost of

his products, and by selling them at a reduced figure, the consumer's power is increased. If, for example, a yard of cloth can be bought for 25 per cent. less in consequence of the use of labor-saving machinery, the consumer has 25 per cent. more to spend in other ways. This he will certainly spend, for every person is spending constantly all the money he receives. Nor is the miser an exception. What he does not spend directly is spent through other persons to whom his money is loaned. The borrower would certainly not take the miser's money to hide in a napkin. He borrows it to use, and not to keep. So, then, all the money saved by reducing the price of a thing is spent in other ways; or, perhaps, for larger quantities of the same commodity. A larger quantity, therefore, is required to satisfy the increased demand, and the labor displaced in the beginning is recalled to satisfy the new demand. This is no imaginary consequence; it was seen long ago. The diminished price has the effect of setting free a portion of the consumer's earnings, which, in turn, is spent for a larger quantity of the same product or some other, and to produce this more laborers are required. When the full cycle of changes caused by introducing labor-saving machinery has been completed, the laborers displaced in the building are at work, prices have been lessened, the consumer's power has been increased, and he can satisfy more of his wants than he could before.

In the interval, however, be it on the displacing of labor and its reemployment, either in the same manufacture, or in some other, suffering must ensue, unless the laborer has a surplus from which he can draw during this interval of unwelcome idleness.

The laborer has not always seen that in the end he would gain from the use of machinery. Even now some persons regard machinery as an enemy. Mr. Moody's "Land and Labor," a very readable book, is a long wail over the evils arising from the introduction of mowing and reaping machines and other agricultural implements. Those who wish to see an exaggerated picture can find it on his page. The methods of farming on the bonanzas are contrasted with those of the small farmer, the happy yeoman of the olden time, who is considered as belonging to the past—a figure of the poet or historian. In other books these pictures may be seen; indeed, not very long since the weavers of Coventry, England, in their desperation over the introduction of such machinery for weaving silk, entered the factories and emptied them as completely as did the New England colonists the tea ships of Britain. For a long period in English industrial history violence attended the introducing of labor-saving machinery. Happily this feeling of antagonism toward machinery is passing away, and all are awakening rapidly to the true condition of things.

Is the statement, though, wholly true that the displaced laborers find employment in consequence of the larger production demanded, which, in turn, is a consequence of cheapening the product, and thereby of enhancing the power of the consumer? It has been glibly assumed by many writers that all the displaced workmen were recalled in due time. Mr. Moody questions the truth of this oft-repeated statement, and we think he is quite as near the truth as those who are opposed to him. Many of them are recalled, but production in many directions, even at lower prices, is far outstripping the power to consume; and, consequently, not all the displaced workmen are recalled; or, if they are, do not work as regularly as before. If, however, the day's labor was shortened, all would have employment, and the remaining evil element springing from the use of labor-saving machinery would disappear. Concerning this subject more will be said in another place.

This is apparent when we pass to the next consequence arising from the introduction of labor-saving machinery, compared with which all the consequences mentioned are insignificant. This is, that the people of our day are able to maintain life at much smaller expenditure of muscular and mental effort than in a former age. Before such machinery existed it was needful for people to toil through long days to sustain life. The farmer had no holiday, nor had the persons who lived within the house. All over the world men were busily and necessarily engaged in tilling the ground, in making the few articles which they had; nor was there much time for culture of any kind. Moreover, as we all know, people had fewer things than they have to-day. Poorer houses, less furniture, no carpets, no glass; a thousand things, in short, which we have, were unknown to an earlier civilization. All these things minister to our comfort, health and happiness. We truly enjoy more than the people of any former age, notwithstanding the poet's song or the philosopher's word. We are happier because our wants are more generally gratified. Compare, for example, the traveling by the people of this age with that by the people of a hundred or two hundred years ago. How much larger is our conception of life! How, in numberless ways, are our views expanded and corrected! Some persons, it is true, maintain that if we had fewer wants we should be happier, but without stopping to assail this position, the world at large pronounces a different verdict. We are happier for the things we have, and are desiring more; and one of the tests of civilization is expanding want and increasing gratification. Now, before the invention of machinery, even the fewer wants which men possessed could not be gratified, except by unremitting toil. Think of the hard burdens then borne by man, of lifting, running and carrying. Even in some parts of India to-day the runner is performing his mission; yet at his swiftest pace how

poor is his speed compared with that of a locomotive. We need not stop to give illustrations of the lessening of the weight and unpleasantness of human employment. With no fact are we more familiar than that modern machinery has lessened in a thousand ways the burden of toiling. Think of the number of children, even, that are employed in factories and other places, and all because the machines are doing the hard and heavy work, leaving only the nimble touching, and watching, and slight adjusting for eye and hand.

Thus it comes to pass that through the beneficence of machinery we can get all the cloth and all the furniture and hardware and other things we need to make life comfortable and desirable, by fewer hours of employment than ever before. The clear consequence is that the millions of mankind have a large space of time left to them for enjoyment in other ways. This is the fact of transcendent consequence. This will appear for several reasons.

First, the workingman is able to educate and cultivate himself. Formerly, if having such a desire, he could not fulfill it, simply because the necessity of toiling for an existence was ever present, leaving no time for such a thing. Now he has hours of his own, and with the creation of libraries and cheap literature, amusements and travel, he can get knowledge and enjoy life in many ways. He is, therefore, put on a more nearly equal plane of enjoyment with the man possessing millions. Nay, it may be questioned whether he does not, in consequence of his newly acquired leisure, enjoy quite as much of life as the other; for one of the indispensable elements of enjoyment is time, is leisure. If the rich man is forever toiling to get wealth, or if he is so strongly wedded to the habit of working that he cannot cease, and spends his days and nights, as many rich men do, in adding to their wealth, what enjoyment does he get from life, save that which comes from accumulating? They are getting none from travel, for they do not travel. They are getting none from reading, for they do not read. They are getting none from amusements, because they do not go to the place where they are to be found. What, therefore, do they get from life? They may, indeed, build houses and furnish them finely; but after all, if their taste has not been improved, they can get but very little more from life than the busiest poor men who are without leisure. Therefore, we repeat, that one of the indispensable elements of enjoyment is leisure; and, if the rich man does not take it, we question whether he gets any more pleasure than any other toiler, perhaps not as much. Of course, we are now looking at the subject very roughly, and rich men are not all of the type described. If the rich man ceases to toil, and uses the leisure which he has gained, of course, with his wealth he may cultivate himself, and expand his mind, and get enjoyment from the world.

But so long as he remains a mere toiler, his pleasure is narrow, confined merely to getting, with perhaps the power and the added importance that come from the possession of wealth. We may add here, parenthetically, that the man who is seeking to acquire a fortune abroad in most cases has a very different idea in view from the accumulator of riches in our land. The foreign money-getter always regards wealth as a means to an end. He never has a thought of continuing in business all his lifetime; but his reason for getting wealth is to increase his enjoyment by ceasing to labor and by improving his leisure in the manifold ways in which it can be improved through culture of mind and heart with the superadded ways which wealth lays open to him. The rich men of our country, for the most part, never have such an end in view. Money-making, which was a necessity in the beginning, becomes a habit fixed and unalterable, and continues to the end. The poor man who envies his neighbor for his wealth, often forgets that he has no culture, and no desire to get it, and, therefore, that his wealth yields him nothing.

The leisure, therefore, brought to mankind by the beneficence of labor-saving machinery is of incalculable importance. Through this he can become a man indeed; through this he ceases to be a slave; through this he can open his eyes to the wonders of the past and the present; through this he can get as much from this life almost as his neighbor who is rolling in his millions. All this comes from the use of labor-saving machinery.

Ignoring the fact, however, that the wants of mankind can be supplied in a much briefer space of time than before, the manufacturer endeavors to employ his men in the old fashioned way of ten or twelve hours a day or longer, and the inevitable consequence is that in a few months, or in a year or two at most, he makes the unwelcome discovery that he has surfeited the world with goods; and then a veritable cyclone visits trade; business suffers; bankruptcy ensues; succeeded by a long and dreary period of depression and recovery. These cyclones or depressions in trade are one of the features of modern civilization. A distinguished Englishman a few years ago endeavored to trace a similarity between them and the sun spots. He seemed to think that one occurred about every seven years. It is certain that they occur much too frequently to be pleasant or profitable for any one. The cure for them is apparent from what has been said. It is sometimes asked, are there any persons in the world poorly clad? Are there persons who want more bread? Certainly. Are not numberless wants unsatisfied? Certainly. Why, then, do you say that there is an over production? Why do you say that the mills must stop running, or be put on shorter time, in order to produce less, if more bread is needed, and more clothing, and more tools and

implements of every kind? We reply that a want without the means to gratify it must be omitted, for the very reasonable assumption that no man can long afford to produce and give away his things. This means bankruptcy. A manufacturer, for example, in times of depression cannot afford to make cotton cloth and give it away to the naked islanders living in the South Sea. By so doing he would soon be in the hands of creditors. Clearly enough, then, we must keep within the realm of consumers having wants, and also the means to gratify them; in other words, have means enough to give a fair equivalent for the things desired. Keeping within this realm, we assert most positively that there can be, and often is, an overproduction of commodities. A man with a good overcoat does not need a duplicate. A man with the latest silk hat does not need a second until this has become unfashionable or worn out. A man who has eaten a good dinner does not need a second until the next day. Therefore, we repeat, human wants have boundaries, rational limitations, and when enough has been produced to satisfy these, the line should be drawn, production should cease. To go beyond that line is to go into danger, and loss will be experienced in due time in depression of trade, with which the world has become familiar.

If this be true, the proper course of industrial development is to reduce working hours to a point at which the products will balance or satisfy the demand; and, when this is done, there will be a larger margin of leisure that may be employed in other ways.

But it is asked, if fewer hours are fixed for the laboring man would he be the gainer? Does he not, in truth, wherever they have been adopted, go into the ale house and while them away there? Does he not become worse through additional leisure? In many cases the answer must be in the affirmative. He is like the horse that has broken away from his prison house into the open field. If the leisure is given him, but is misimproved, this is no argument for depriving him of it, for he may learn, through harsh lessons, that he should use his precious hours differently; or, if he does not learn this, his children, at least, may, and probably will. We believe, therefore, that society will soon recognize what machinery has wrought in the way of enabling men to satisfy all their wants in less time than formerly, and that the workingmen will also learn how to put that leisure to the best uses.

Suppose that manufacturers should run their machinery fewer hours each day or week than before, in consequence of the increased product, as previously described, the question remains for answer, shall the workingmen be paid as much for fewer hours as they were paid before? This question is not so important on careful analysis, we believe, as may be imagined. If wages are correspondingly reduced, then, of course, the power of the workingman to

consume is correspondingly diminished. The effect of this would be, in the end, that the manufacturer would be obliged to sell at a reduced price; consequently, the smaller wages paid to the workman would buy as much as the wages paid under the old régime. This is one way of looking at the question.

Let us take another view. Suppose a workman was paid as much for the fewer hours as for the larger number. Of course his ability to consume would be the same as before. We will also assume that he will spend his entire earnings, and therefore the quantity of product manufactured would remain the same. It can be clearly seen, however, that the manufacturer's profit must be reduced. In other words, this arrangement would have the effect of diminishing his profit or of increasing the cost of production, which would be the same thing. If he was paying all he could afford to pay before reducing the hours of labor, leaving no, or only a narrow profit for himself, then, of course, he would be obliged to reduce wages in the event of diminishing the hours of employment. Otherwise he would continue production at a loss. It must be admitted that he could not afford to do this permanently, for it would mean bankruptcy. We come, then, in sight of one side of this problem, namely, that the utmost which the manufacturer can afford to pay as wages is a sum that will not exceed the profits of his business. In other words, he cannot afford to pay so much for his wages as would involve a permanent loss in production. Up to this point, deducting a sufficient sum for his own living, and the wear and tear of his plant, and the payment of interest and all expenditures pertaining to his business, he can pay as much for wages as he pleases.

What he ought to pay is a fair wage for the service rendered. If permanently reducing the hours of employment, the wage actually paid would doubtless vary in different cases. In some, where the employer's profit is very large, he perhaps could afford and would pay as much for the shorter term of employment as for the longer. In other cases, where the margin of profit is very small, the employer would be obliged to reduce his wages to such a point as would leave something for himself. All wages would be graded between these two poles in adjusting them to the new condition of things.

We may look at another side of this question. Suppose the employer did find it actually needful to reduce the wage correspondingly with the shorter hours, would not the workman be as well off as he is now? At first it might seem as though he would be the loser by such a change. Of course, his power of consumption would be diminished. But suppose he was employed in the old way for the longest day and receiving the old wage. What then? As we have previously said, the result of thus employing him

would inevitably be, that after a year or two of prosperity the market would become glutted with products which could not be sold, and the producer would be obliged to stop at varying intervals in order for the consumer to overtake him. Regarding the period of prosperity and depression as one, the entire earnings received by the workingmen would be no greater probably than would be received by him for the shorter hours under the new régime, and with regular employment. Therefore, we conclude, that if a reduction in his wage should be needful, in more or less cases under the new condition of things, he would fare quite as well as he does now with higher wages paid part of the time, but followed by inactivity or idleness, with loss of pay, during another portion.

We are thus brought to another side of our theme, the desirability or gain to society from low prices. There are many economists, both in this country and in foreign countries, who regard diminished or low prices as the true goal of industrial civilization. Every diminution is hailed with joy, for, say they, is not the power of the consumer thereby increased? Can he not get more for his money, more complete satisfaction of his wants? If the question stopped at this point, if this were the only element in it, the answer would be quite conclusive; but the truth is, every consumer, with here and there an exception, is also a producer, and if he purchases the things he desires at diminishing figures, he must also sell at diminishing figures, and, therefore, the gain in his purchasing power is lost in his selling power. The one balances the other.

It seems to us clear enough that low prices do not signify any permanent advantage to society. The living on a high grade of prices or a low grade means the same thing. There is nothing talismanic or magical in prices to society. There may be, indeed, enormous gains derived from diminishing prices, as we shall soon see, but whether these are good for society generally depends on their causes.

One thing we may assume before going further with our argument, that society permanently suffers from any considerable change from one basis to another during the period of readjustment. The speculator, indeed, does rejoice in and profit by the oscillations of prices, but this class only. Every increase is attended by a loss to somebody. This could be proved in a thousand ways, if proof were needful. We will therefore assume, without attempting to prove, that substantial, permanent prices are desirable for society. Some changes may indeed occur, but anything in the way of a violent change, of any kind, brings injury to some person or class of society. Assuming this, we remark that whenever low prices are caused by the invention and use of machinery or improved transportation or the use of natural

agencies or instrumentalities, then, indeed, society is helped by the change. As we saw at the outset, in introducing labor-saving machinery for making textile goods, the workingmen were paid as much as before; nevertheless the goods were sold at a greatly reduced price. No class of laborers or producers suffered from these new prices, but society, as a whole and individually, was the gainer by the economies thus wrought.

But whenever a lower price is caused by excessive competition, or more specifically, whenever it is caused by the manufacture and sale of a thing at a loss, then society is a positive loser. Two or three illustrations may suffice. Not long ago a paper company failed in Chicago, owing a large amount of money. The company had been selling paper at very low rates for a considerable period, and the market had wondered how the company could afford to compete so sharply in the sale of its goods; but after the failure all was clear. The company had been borrowing money of the banks and selling its products at a positive loss. In other words the capital of the bank had been transferred to the consumer of the paper products. Now, if this company had possessed a large capital, and had chosen to sink or sacrifice a portion of it in selling its products at a lower figure, perhaps it would have been justified in executing such a policy. But in borrowing money to sink in the manner described, no possible justification could be given. No bank in the country would have loaned that company a dollar if it had supposed its money was to be put to such a use. No bank would have been justified in lending its money to a company from which no return was expected.

So, too, if a merchant should buy goods and sell them at a loss, he would be guilty of the same wrong as was inflicted by this paper company. No commission house or manufacturer would sell anything to such a merchant. We all know that during times of depression, when prices are shrinking, commission houses, and other large sellers of goods, are constantly watching their weaker purchasers. They are afraid that this very thing may be done, and they watch with eagle eyes to prevent a loss. We repeat, therefore, that no man or company is justified in using the capital of another in ruinous or losing competition, and we feel quite sure that every reasoning man would agree with us in this conclusion.

Let us, then, suppose that this paper company, instead of getting the needful capital or money from the banks for indulging in such a policy, had determined to take it from the muscle and ability of their workingmen in the way of reducing their wages and thus making a cheaper product. Would there be any justification for adopting such a policy? If the company did wrong in borrowing of the banks without letting them know of its true condition; that it was making paper and selling the same at a loss; or, in other

words, of indulging in excessive or ruinous competition, would not the wrong be equally great of reducing wages and of thus taking the same amount of money in the form of wages from their workingmen? To our mind the guilt of the latter policy is perhaps far worse than the guilt involved in the former, and for the reason that the workingmen have less power to resist. Therefore, when low prices are thus effected through them or through the innocent lenders of money, these do not signify that society has gained anything. In the one case it means a sinking of capital outright; in the other, it means the extraction, the taking of wealth from another, without paying anything therefor. In both cases the wrong is equally great.

Moreover, all can see that whenever excessive competition is undertaken by means of extracting it from the working classes, all nations or manufacturers can play at the same game. Of late, the manufacturers in Germany are the worst sinners in this regard. They are paying the lowest wages, are working their men the longest hours, many of them keeping their factories going on Sundays, and by resorting to these desperate expedients, are enabled to produce to-day more cheaply than any other nation. They are driving the English from the South American markets, and indeed driving them from the markets of England, and the English manufacturer is looking aghast at this state of things. What shall he do, he inquires, to meet this strange and unexpected competition?

It is seen clearly enough that this is the rudest kind of competition; it is only a return to slavery under another form, and it can be practiced, too, by one nation as well as another. Moreover, the sad question may be asked, if the German manufacturers continue to practice this policy, will not other nations be obliged to resort to the same expedient? Anyhow, we can see that there is no gain to society from this excessive competition, whether taken from the workingmen or from the banks in the form of borrowed capital, or from the commission houses, or other sellers, in the form of goods. In all cases the policy deliberately formed of buying or producing goods which are to be sold at a loss, and perhaps with the expectation of not repaying the same, is very nearly allied to theft. Society should look on this form of competition very much in that light. All manufacturers may be obliged to do like the Germans, if this policy be continued. That the manufacturers in this country may never be obliged to adopt it must be the sincere wish of every one.

No inquiry is more pressing than the inquiry, what can be done to stop this excessive competition? We see one way in which a cure is working itself out, namely, by union, by monopoly. Of late we have heard a great deal about the formation of trusts or trust companies. The reason given for

forming them, in almost every case, is the same, namely, excessive competition. Nor is this excuse without foundation. The rubber manufacturers who have combined within a few months were on the edge of bankruptcy, and some of them were actually in this condition. The envelope manufacturers, among the last to combine, were selling their wares at a ruinously low figure. The sugar refiners, recently combined, have been doing business for several years on an enormous capital at great hazard, and without making any profit. The wall paper manufacturers have a similar justification for uniting. The whisky distillers, too, are tumbling to pieces, and a whisky trust among this nefarious class seems the only door of escape from financial ruin. These illustrations will suffice. The cure, therefore, is coming among some classes of manufacturers; but the remedy is regarded with no favorable eye by the public. The people are alarmed over the rapid formation of these companies, and not without reason.

Cannot a better remedy be found than in monopoly and excessive exactions from lender and laborer? Cannot, for example, some method be found for checking a German manufacturer who is pursuing his cold-blooded policy toward his employés? Cannot nations say, we will have nothing to do with such producers; we will shut out their wares from our markets, leaving our own for those who are willing to do more justly by their fellow men? But this answer may smack of monopoly; it depends entirely on the situation of the nation if its resources be unlimited, if it possess all manner of skill and all kinds of raw materials, and is, in truth, abundantly able to supply all the wants of its people, it may perhaps wisely sever itself from the outside world which would endeavor to strangle or to destroy a social system resting on different principles.

Perhaps a better remedy may be found. A clear diagnosis of the situation, however imperfect ours has been, may lead a wiser person to devise a more effective remedy. The sooner the true nature and consequences of this competition are understood the better. The world should come to learn that neither high prices nor excessive competition are the true goal of society; that neither of these conditions is an element in human progress; but that a fair price, an equivalent for the service rendered, is in harmony with human advancement. Competition that means this and no more is of a perfect kind. Competition in excess of this means physical and moral degradation, which society should seek to prevent.

I have now traced, briefly and imperfectly, some of the moral and economic consequences of using labor-saving machinery. I have shown that the most momentous consequence is the enabling of mankind to satisfy their wants in a much shorter time, and with a less expenditure of physical and mental effort.

They are, therefore, within sight of a new vantage ground, and which, when clearly seen, will doubtless be occupied. When it is, the evils from excessive competition will cease ; men will live on a nearer physical and mental equality ; and the release from legal servitude will be followed by a more complete pecuniary and real independence.

It is a matter of sincere regret that a paper of so much value and interest as Mr. Bolles' could not have been read in the presence of the Commissioners.

At the fifth convention, held at Madison last year, on motion of Mr. Bishop, the gentleman in charge of bureaus were requested to send to the Secretary a report of the various lines of statistical work carried on by heads of departments in their respective States, and if deemed best by him that he should publish the same in the proceedings of that Convention. This request was reiterated at this convention, but owing to the length of this report, and the fact that not all the States having Departments of Labor Statistics have reported, and that some who have reported have misinterpreted the meaning of the motion, it has been deemed unadvisable to publish them at present.

The business of the Convention being concluded, Mr. Hutchins moved to adjourn. The motion prevailed, and the Convention adjourned to meet at the call of the President and Secretary at Hartford, Connecticut.

REPORT
OF THE
QUARTERMASTER GENERAL

OF THE
STATE OF MICHIGAN,

FOR THE YEARS 1887-1888.

BY AUTHORITY.

LANSING:
DARIUS D. THORP, STATE PRINTER AND BINDER.
1888.

REPORT.

HON. CYRUS G. LUCE, *Governor and Commander-in-Chief of the Military Forces of Michigan:*

SIR—In compliance with the laws of the State, I have the honor to submit herewith my report of the Quartermaster's Department from September 30, 1886, to June 30, 1888, inclusive, with inventories of the military properties of the State.

STATE TROOPS.

The State troops consist of four regiments, containing thirty-six companies, the 1st and 4th being composed of eight companies each and the 2d and 3d of ten companies each. The arrangement began by my predecessor, Gen. Geo. A. Hart, to change the Sharpe rifle for the Springfield has been completed, and the entire brigade is now armed with the improved Springfield rifle, the same arm adopted by the United States army.

Company G, 3d Regiment, located at Marquette, was mustered out of the service May 5, 1888, and a new company was admitted in its place.

Under your orders, dated June 13, 1888, I armed and equipped the new company by turning over to them the arms and equipments of the company mustered out.

MUSEUM.

The museum attached to the Quartermaster's Department has steadily increased in size and in public favor. As the years go by, there seems to be a growing interest in the relics and mementoes of the late war, and many things that a few years ago were hardly noticed are now looked upon as nearly sacred. The museum furnishes a safe repository for all such articles, which can be deposited in this section of the military department, receipts being given and the articles safely kept and returned to the owners upon request and return of receipts.

The flags carried by the Michigan troops in the war for the Union, together with a large number of captured rebel flags, are still there, and to the thousands who yearly throng the Capitol are silent but powerful witnesses to the patriotism of the men who marched and fought in the "sixties."

STATE ENCAMPMENTS.

The camp for instruction for 1887 was held at the old camp ground in Brighton August 4 to 8, both inclusive, the total attendance being 1,825. I furnished, by your orders, the necessary transportation and issued to the several commands on their requisition the proper camp equipage and supplies.

The service of the railroads was very satisfactory, and very little delay was experienced, nearly every company arriving at and departing from the camp on schedule time.

Your orders for an encampment on Mackinac Island were received April 5, 1888, ordering me to provide transportation, tents and supplies for the camp beginning July 12, 1888.

In obedience to this order I at once removed such of the camp material as was required from Brighton and contracted for transportation for the troops and camp equipage. The main lines of transportation were the Michigan Central Railroad, the Grand Rapids and Indiana Railroad, the Duluth, South Shore and Atlantic Railroad, and the Detroit and Cleveland Steam Navigation Company. The officers of these lines and the lines connecting with them seemed to fully appreciate the State troops and did all in their power to make the encampment a success, extending every courtesy possible to make the trip a pleasant one for the men and to give prompt service, at the same time granting such a rate of transportation as made it possible with the limited appropriation to take the troops the increased distance. The result was that, although the average distance traveled was nearly double that of former years, the expenses of the camp were reduced about one dollar per man.

Accommodations at Mackinac were limited, there being only room for two regiments at a time. If new grounds could be obtained upon the Government reservation or elsewhere more extensive than the ones occupied, I know of no more desirable spot in the State for a permanent camp ground.

The increased interest in the State encampment, as shown by the increased attendance, is the best evidence that the change from Brighton to Mackinac was a wise one.

The artillery of the State consists of five Parrott ten-pounders and two old style brass guns that are condemned and unserviceable.

Six hundred new overcoats were purchased during the year. These, with the ones already on hand, made a total of 1,096, enough so that every man in the camp of instruction was furnished an overcoat. But this number is not enough in case the whole brigade is in camp at once. The men are without haversacks or canteens, and this, in my opinion, is a serious matter. For while the troops in camps of instruction can be subsisted and provided with everything needed, if they are ever called into service for any purpose the want of these articles might seriously cripple their effectiveness. I recommend that these articles be furnished them at once, and believe that it is of more importance than the camp of instruction, and if necessary to omit this for one year to supply them it should be done.

On April 23, 1887, on my recommendation, you promoted Captain Lafayette Harter to be Lieutenant Colonel and Assistant Quartermaster General. The selection was an excellent one. He has had immediate charge of the office at Lansing and attended to all the details and clerical work. He has been a faithful, courteous and amiable officer, always at his post, fully conversant with all his duties, and prompt in their performance. He has been of invaluable assistance to me, and is entitled to a large share of the credit, if any, that is due to the administration of the office.

The annexed tables, schedules and statements show the amount of property on hand and the financial condition of the department in detail.

All of which is respectfully submitted.

S. B. DABOLL,
Brigadier General and Quartermaster General of Michigan.

REPORT OF THE QUARTERMASTER GENERAL.

5

RECEIPTS AND DISBURSEMENTS.

There has been received in cash by this Department, from January 18, 1887, that being the day the office and stores were turned over to me, the sum of seventy-two thousand nine hundred thirty-six dollars and eighty-four cents (\$72,936.84) as follows:

From Gen. Geo. A. Hart.....	\$ 2,812 17
“ State Treasurer.....	69,280 80
“ Stores sold.....	843 87
	<hr/>
	<u>\$72,936 84</u>

The following is a classification of expenditures from January 18, 1887, that being the date I assumed the duty of the department, to June 30, 1888, inclusive, and vouchers for which are on file in the office of the Auditor General:

Expenses of department headquarters, including offices of Adjutant General, Quartermaster General, Inspector General, and State Military Board.....	\$ 6,761 80
Expenses at brigade, regimental, battalion, and company headquarters.....	18,348 21
Clothing, camp and garrison equipage, miscellaneous supplies for troops, and repairs on same.....	3,958 14
Expenses of encampment of troops, 1886.....	10 00
“ “ encampment of troops, 1887.....	40,302 32
“ “ encampment of troops, 1888.....	101 10
Balance of cash on hand June 30, 1888.....	3,455 27
	<hr/>
	<u>\$72,936 84</u>

The following is an abstract of classified expenditures from September 30, 1886, to June 1, 1888:

EXPENSES AT DEPARTMENT HEADQUARTERS.

Offices of the Adjutant General, Quartermaster General, Inspector General, and State Military Board.

Pay of clerical work in Adjutant General's office.....	\$1,739 83
“ “ “ Quartermaster General's office.....	2,016 67
“ “ “ of State Military Board.....	316 66
“ Armorer.....	1,100 00
Per diem and mileage of State Military Board.....	741 69
Expenses of officers of Michigan State troops while on special duty.....	482 40
Printing, lithographing, and stationery.....	527 96
Postage, Adjutant General.....	147 33
“ Quartermaster General.....	118 25
Rent of postoffice drawers.....	7 00
Incidental expenses.....	159 55
Freight, express, cartage.....	295 89
Telegrams.....	84 82

REPORT OF THE QUARTERMASTER GENERAL.

Telephone	\$122 05
Expenses inspecting companies of State troops.....	437 57
Balance paid J. W. Frazier in exchange of "Sharp's" rifles for "Springfields," cal. 45.....	976 50
Advertising, proposals.....	15 40
Engraving, Creedmore, 1884.....	3 25
Funeral expenses of Gen. John Robertson.....	232 50
	\$9,525 32

Expenses at Brigade, Regimental, and Company Headquarters.

Postage stamps and incidental expenses, Brigade headquarters....	\$196 00
Allowance to Regimental headquarters for incidental expenses....	600 00
" " Company headquarters for incidental expenses.....	5,384 42
Pay of Regimental adjutants.....	307 86
" Regimental Quartermasters.....	299 95
" Captains	2,420 16
Rent of Armories.....	16,280 14
Mileage and expenses officers attending elections	750 17
	\$26,238 70

Clothing, Camp and Garrison Equipage; Miscellaneous Supplies for Troops and Repairs on same.

Fatigue caps.....	\$375 00
Letters and figures for helmets and fatigue caps.....	28 50
Uniform trousers.....	1,526 50
Officers' swords.....	32 00
Tents, complete.....	200 00
Bed ticks.....	2 00
Mattresses	21 25
Flags	17 50
Manuals of Guard Duty.....	53 20
Tent poles and pins.....	89 74
Repairs on tents.....	207 80
Repairs on arms.....	15 00
Buttons.....	174 00
	\$2,742 49

Expenses of Encampment of Troops in 1886 (not contained in last report)."

Transportation of troops.....	\$213 95
Transportation and use of horses.....	91 00
Pay and subsistence of troops	287 28
Labor.....	25 50
Hay, straw and oats.....	15 00
Damage to property.....	98 36
	\$731 09

REPORT OF THE QUARTERMASTER GENERAL

7

Expenses of Encampment, 1887 (not contained in last report).

Transportation, pay and subsistence of laborers.....	\$1,163 06
" of troops.....	7,421 56
" and use of horses.....	1,279 29
Pay and subsistence of troops.....	26,658 73
" " " Brigade band.....	926 00
Freight, express, cartage, and teams.....	661 84
Hay, oats, straw, wood, and oil.....	208 06
Ice, including filling house, February.....	60 00
Lumber, hardware, and building supplies.....	517 68
Medical supplies (purchased by Brigade Surgeon).....	173 40
Damage to crops, etc.....	64 29
Rent of grounds.....	500 00
Iron pipe, rent of steam boiler, paint, etc.....	668 41
	<hr/>
	\$40,302 32

Expenses of Encampment, 1888.

Transportation, officers visiting Mackinac, laying out camp.....	\$101 10
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REPORT OF THE QUARTERMASTER GENERAL.

Date.	Military Fund.	Amount, Dr.	Date.	Military Fund.	Amount, Cr.
1886 October...	To Disbursements.....	No Disbursements.	1886 October...	By amount on hand from last report.....	\$11,780 98
November.....	".....	No Disbursements.	October.....	" stores sold.....	6 55
December.....	".....	\$10,150 45	December.....	".....	1,184 09
1887 January...	".....	128 29	1887 January...	" ".....	8 26
February.....	".....	700 01	March.....	" ".....	83 (8
March.....	".....	1,101 01	April.....	" ".....	6 75
April.....	".....	1,043 11	" amount received from State Treasurer.....		6,000 00
May.....	".....	No Disbursements.	" stores sold.....		8 62
June.....	".....	No Disbursements.	" amount received from State Treasurer.....		10,000 00
July.....	".....	9,686 73	" ".....		45,000 00
August.....	".....	No Disbursements.	" stores sold.....		18 50
September.....	".....	27,476 65	" ".....		12 62
October.....	".....	13,918 14	" damage and freight on camp equipage.....		25 25
November.....	".....	1,226 90	" stores sold.....		70 62
December.....	".....	No Disbursements.	" ".....		28 85
1888 January...	".....	10,890 05	" property destroyed at camp of 1887.....		66 00
February.....	".....	No Disbursements.	" amount received from State Treasurer.....		1,280 80
March.....	".....	1,002 84	" ".....		8,000 00
April.....	".....	1,274 13	" stores sold.....		120 50
May.....	".....	452 27	" ".....		111 57
June.....	".....	442 41	" ".....		17 00
	Balance to new account.....	3,455 27	" ".....		100 00
			" ".....		221 25
	Total.....	\$83,096 29	Total.....		\$83,096 29

RECAPITULATION.

REPORT OF THE QUARTERMASTER GENERAL.

Date.	Military Fund.	Dr.	Date.	Military Fund.	Cr.
1888 October.... November.... December....	To Disbursements..... "..... ".....	No Disbursements. No Disbursements. \$10,159 45	From Sept. 30, 1888, to July 1, 1888.	Expenses at Department Headquarters, offices of Adjutant General, Quartermaster General, Inspector General and State Military Board..... Expenses at Brigade, Regimental and Company Headquarters..... Clothing, Camp and Garrison Equipage, Miscel- laneous supplies and repairs..... Expenses, 1888, Encampment, not contained in last report..... Expenses, 1887, Encampment..... Expenses, 1888, Encampment.....	\$9,525 33 26,238 70 2,742 49 731 09 40,802 33 101 10
1887 January.. February.. March..... April..... May..... June..... July..... August..... September	"..... "..... "..... "..... "..... "..... "..... "..... ".....	128 29 700 01 1,101 04 1,082 11 No Disbursements. 9,656 73 No Disbursements. 27,476 65 No Disbursements.			
October.... November.... December....	"..... "..... ".....	13,918 14 1,226 90 No Disbursements.			
1888 January... February.. March..... April..... May..... June.....	"..... "..... "..... "..... "..... ".....	10,890 05 No Disbursements. 1,082 84 1,274 18 452 27 442 41			
	Total	\$79,641 02		Total.....	\$79,641 02

All of which is most respectfully submitted.
I have the honor to be, very respectfully your obedient servant,
SHERMAN B. DABOLL, Brigadier General and Q. M. General, Michigan.

APPENDIX.

APPENDIX.

STORES ON HAND IN QUARTERMASTER GENERAL'S DEPARTMENT AT LANSING.

ARTILLERY.

6 pdr. brass gun.....	3
6 " " " carriage.....	3
6 " " " limber.....	1
4 " " " " captured.....	1
4 " " " carriage, captured.....	1
4 " " " limber, captured.....	1
4 " " " chest, captured.....	1
Breech loading brass gun, captured, dismantled.....	1
Tarpaulins.....	3
Sponges and rammers, 6 pdr.	1
Sponge covers.....	5
Gunners' haversacks.....	4
Worm and stave.....	1
Handspikes trail.....	2
Thumbstall.....	1

SMALL ARMS, APPENDAGES AND ACCOUTREMENTS

Springfield rifles, cal. 45.....	2
Revolvers—Smith & Wesson's.....	3
" holsters.....	3
Bayonets, Springfield rifles, cal. 45.....	2
" Scabbards, steel.....	46
Breech block.....	19
Thumb vices.....	16
Tumbler punches.....	204
Headless shell extractors.....	728
Bridles.....	2
Bridle screws.....	9
Cam latch springs.....	22
Extractors.....	1
Main springs.....	11
Tumblers.....	7
Sear screws.....	7
Hammers.....	47
Breech block cap screws.....	7
Ejector springs.....	2
" spring spindles.....	2
Firing pins.....	248
" pin screws.....	5
Tumbler screws.....	52
Wiping rods.....	221
Wipers, brush.....	21
Gun slings.....	49

REPORT OF THE QUARTERMASTER GENERAL.

Cartridge boxes.....	65
Waist belts.....	43
Knapsacks and straps.....	13
Swords—officers.....	8
Swords—non-commissioned officers.....	19
Scabbards—non-commissioned officers' swords.....	28
Frogs " " " ".....	8
Arm chests, Springfield rifle.....	14

AMMUNITION IN STORE AT MAGAZINE.

Ammunition for Cannon and Small Arms.

Rounds canister cartridges for Gatling gun (1 inch cal.).....	1,983
" solid shot for Gatling gun (1 inch cal.).....	1,600
Conical shells for 10 pdr.....	90
Blank cartridge for 10 pdr.....	178
Rifle ball cartridges (50 cal.).....	2,860
" " " (45 cal.).....	50,680
" blank cartridges (45 cal.).....	32,780
Cases muzzle loading cartridges.....	24
Revolver (45 cal.).....	1,660
Pounds cannon powder.....	625
Metallic powder kegs.....	25
Friction primers.....	200

HORSE EQUIPMENTS.

Saddles complete.....	17
" blankets.....	5
Bridles complete.....	16
Guidon sockets -stirrup.....	1
Harness—double sets.....	4

ORDNANCE TOOLS AND MATERIALS.

Braces.....	2
Brace bits.....	2
" screw-driver.....	1
Square—steel.....	2
Cold chisels.....	2
Cutting nippers.....	1
Funnels.....	1
Files—flat.....	1
Files—3 square.....	2
Hammers.....	2
Pliers.....	1
Saws—hand.....	2
Wrenches—monkey.....	2
Punches—steel.....	4
Vises—iron.....	2
Shipper's scraper.....	2
Sets stencil letters.....	1
" " figures.....	1
Screw drivers.....	997

QUARTERMASTER'S STORES.

Clothing.

Helmets (serviceable).....	188
" (white).....	17
Forage caps (serviceable).....	4
Great coats.....	1,096
Uniform coats.....	6
Blouses.....	238
Trousers.....	55
Crossed rifles.....	54

APPENDIX.

15

Letters—white	1,457
“ brass	1,665
Figures—brass	790
“ white	483
Pairs chevrons—Hospital Steward	1
“ “ Sergeant Major	14
“ “ Musician	17
“ “ Q. M. Sergeant's	52
“ “ 1st Sergeant's	76½
“ “ Sergeant's	76
“ “ corporal's	125½
War service stripes	70
State “ “	104½
Blankets—single	816
Bed sacks	500
Mattresses—single	116

Camp Equipage.

Tents 9x9	884
“ 9x12	126
“ 11x14	8
“ 12x18	8
“ 16x32	42
Tent flys 9x9	53
“ “ 9x12	87
“ “ 11x14	9
“ “ 12x18	8
Pieces canvas for sink covers	6
Floor “	1
Repair “	1
Lamps	12
Camp chairs	6

Flags.

Flags—garrison	1
“ National camp	4
“ General Headquarters	2
“ Q. M. General	1
“ Field Hospital, mark	6
“ Brigade guidons, mark	2
“ target practice, mark	7
Flag halliards, mark	6
“ belts and slings	2

Hospital Stores.

Box Surgeon's supplies	2
Sheets	16
Pillow slips	45
“ cases	27
Towels	10

Miscellaneous Stores.

Rolls of oil cloth for table	2
Knives and forks—dozen	6
Table spoons—dozen	4
Tea “ “	12
Pot “ “	1
Bread knife	2
Carving knife and fork	1
Steel	1
Ice pick	1
Kitchen towels—small	6
“ “ large	3
Crumb brush and pan	1

Plates—dinner.....	52
Casters.....	4
Salt bottles.....	18
Mess chests.....	2
Camp chairs.....	6
Lanterns.....	81
Enlistment records.....	18
Duty book.....	7
Rosters of commissioned officers.....	7
Nail pull.....	1
Laws, rules and regulations.....	808

STORES AT ISLAND LAKE AND MACKINAC.

Shovels.....	2
Spades.....	12
Brooms.....	28
Rakes—wooden.....	30
“ iron.....	8
Dung forks.....	4
Wheelbarrows.....	3
Oil cans—bench.....	1
“ “ 1 gal.....	4
Funnels—tin.....	3
Lanterns.....	18
Cups—tin.....	219
Dippers—tin.....	6
Wash basins.....	273
Candlesticks.....	14
Pails—wooden.....	16
“ paper.....	57
Camp tables.....	72
Range—cooking.....	1
Stove—gasoline.....	1
Axes—chopping.....	27
Ax helves.....	12
Mauls—iron.....	3
Sponges and rammers.....	1
Trail spikes.....	1
Water casks.....	79
“ tanks.....	2
Target discs.....	3
Putty knives.....	3
Cots (canvas).....	14
Pumps.....	1
Flag pole sockets.....	10
Hospital boxes.....	4
Extension ladder.....	1
Rubber hose—pieces.....	3
Trigger tester.....	1
Pick-axes.....	2
Sprinkler—tin.....	1
Arm chests.....	14

BUILDINGS ON CAMP GROUNDS.

Ice house.....	1
Kitchen.....	41
Stables.....	3

CLOTH FOR UNIFORMS.

Blue cloth—yards.....	47
“ trimming “.....	191
“ kersey “.....	51



BIENNIAL REPORT
OF THE
BOARD OF CONTROL
OF THE
STATE PUBLIC SCHOOL
FOR
DEPENDENT CHILDREN

For the Years ending June 30, 1887, and June 30, 1888. 

BY AUTHORITY.

LANSING :
THORP AND GODFREY, STATE PRINTERS AND BINDERS.
1888.

OFFICERS AND EMPLOYES.

BOARD OF CONTROL.

ISAAC A. FANCHER, President, - - - - - MT. PLEASANT.
RICHMOND E. CASE, - - - - - THREE RIVERS.
C. D. RANDALL, Secretary and Treasurer, - - - - - COLDWATER.

WESLEY SEARS, - - - - - SUPERINTENDENT.
WM. B. STREETER, - - - - - STATE AGENT.
ELLA F. CORWIN, - - - - - CLERK.
SARAH D. PARSONS, - - - - - MATRON.

COTTAGE MANAGERS.

FANNIE RUSSELL, SUSAN SAWYER, LUCY G. ROGERS,
LIDA J. NESBITT, MATTIE B. LYON, NETTIE COWLING,
FLORENCE C. MECHEM, S. LIZZIE GUERNSEY, H. AMANDA HILLIS.

TEACHERS.

SARAH B. GOODMAN, LUCELIA E. STAPLES, JANETTE T. DOUGHTY,
JULIA E. GOODMAN, SUE B. PECK, ESTELLE E. ANDERSON.

DR. ELLA MARX, - - - - - RESIDENT PHYSICIAN.

STATE PUBLIC SCHOOL.

LOCATION AND GENERAL DESCRIPTION.

The State Public School of Michigan is situated one mile north of the center of the city of Coldwater and just outside of the corporation limits. The distance from the depot is about one and three-fourths miles.

Coldwater is situated on the Lake Shore and Michigan Southern Railway, about 156 miles east of Chicago, 86 miles west of Toledo and 115 miles southwest of Detroit.

The buildings consist of the administration building, with the ground plan in the shape of a cross, having a frontage of 198 feet by a depth of 175 feet in the central part, around which are grouped thirteen others, one of which is used for a water tower, boiler and engine-house and gas works, one for a laundry, one for a hospital, one for a school-house, and the other nine for cottages. All of these are warmed by steam and lighted by gas. Except the hospital, they are constructed of brick, and have not only a solid but a cheerful and homelike appearance. The latest improvements in steam-heating, cooking, laundry, bathing and ventilating apparatus have been introduced.

The site is a commanding one, about twenty-five feet above that of the city, having a charming prospect in every direction. There is a farm of 120 acres connected with it, on which there is a bearing orchard of 500 apple trees. The total cost of the whole outfit is about \$215,000.

The system is the family and congregate combined. The children work, eat, and attend school together, but in all other respects live as separate families, except that these families are somewhat larger, numbering from twenty-five to thirty members. The cottages are the homes, in charge of intelligent women who care for the children as mothers care for their smaller families.

The price of admission to the institution is dependency upon the public.

The object of the institution is to provide for all the dependent children of the State, whether in or out of the county poor-houses, who are sound in

body and mind, over two and under twelve years of age; to maintain and educate them while temporarily here, and as soon as satisfactory homes are found to place them there under contracts securing good treatment as members of the family, and an elementary education; thus fitting them for good citizenship.

The school was opened May 21, 1874, since which time 2,512 have been admitted. The accommodations are for 270 children.

The State of Michigan, which has existed only about forty years, has the merit of preceding ancient Europe in the inauguration of a new era for dependent children.—*Address of Drouin de Lhuys before the French Institute in 1878.*

STATE PUBLIC SCHOOL.
OFFICE OF THE SECRETARY AND TREASURER,
Coldwater, June 30, 1888.

}

TO THE HON. CYRUS G. LUCE, *Governor of Michigan:*

I hereby respectfully transmit to your Excellency, as provided by law, the Report of the Board of Control of the State Public School for the fiscal period of nine months closing June 30, 1887, and for the fiscal year closing June 30, 1888, including the reports of the treasurer, superintendent, State agent and physician for the same time.

Very respectfully yours,

C. D. RANDALL,
Secretary and Treasurer.

REPORT OF THE BOARD OF CONTROL.

To the Governor, the Legislature, and the Superintendent of Public Instruction:

The Board of Control of the State Public School hereby respectfully submits the report of the transactions of that institution for the fiscal period of nine months closing June 30, 1887, and for the fiscal year closing June 30, 1888; together with the reports of the superintendent, State agent and physician for the same time.

The report of the superintendent furnishes an extended account of the work in general of the institution.

The State agent describes in detail the indenturing and supervision of children in families in various parts of the State.

The Board treats mainly on the work of the school in general, the merits of the Michigan system for the care and disposal of dependent children, the appropriations of 1887 and 1888, and the appropriations recommended for 1889 and 1890.

A careful study of these reports, including the valuable statistics, is respectfully requested.

MORE KNOWLEDGE OF THE SCHOOL DESIRABLE.

A more thorough acquaintance of the people with this school is very desirable. The plan and operations of other State institutions have long been comparatively familiar to the people. Though this was established over seventeen years ago, and has been in operation for over fourteen years, it is necessary to explain quite often the work it is doing. The press is entitled to much credit in extending ready assistance in circulating useful information. By large correspondence, circulars and reports, very much is done each year to familiarize the people with this unique educational charity. Lately circulars to those enquiring for children, and circulars to county agents have been extensively distributed, and have had much to do in maintaining efficiency in receiving and indenturing children.

It is desirable that all should know—

1. There are here always little boys and girls, two years of age and upwards, for whom good homes are desired.

2. These children will average well, mentally, morally, and physically with those in the country schools. They are not delinquents. They are only dependent. This is not an institution for offenders. It is a part of the educational system of the State.

3. Applicants who are approved by the county agents are always welcome, and especial pains will be taken to select children suited to their homes.

ECONOMY OF THE MICHIGAN SYSTEM.

In the report for 1885 and 1886 the Board decreased the estimates for current expenses for 1887 and 1888 \$4,000 per year, and \$8,000 less was requested for special purposes, making a total reduction of \$16,000 for the present biennial period. This was done when as many children were being received and indentured as usual and when the prospects indicated no decrease in demands on the institution. With the appropriations made, the school has provided for all children received, leaving room for more. For the next two years the Board has estimated that the present standard of efficiency in the work can be maintained with the sum of \$33 000 per year, and \$2,000 less for special purposes, making a reduction of \$6,000.

This sum of \$35,000 or \$33,000 represents not only maintenance while in the institution, but also education, proper training and placing in family homes. The cost per capita for all received is less than mere support without education in the county poorhouses.

And yet to some who have given the subject little thought and no study, the amount paid for current expenses is liable to seem large. About 400 children are yearly clothed with this money and kept part or all the year at the institution. About 200 are received each year, and about the same number is placed in families, and the cost per capita for all received is less than \$100 per year.

This of itself is considered economical, but the greatest economy of the Michigan system is not limited to the per capita cost. This economy is more in the effects produced by the State Public School in reducing and preventing child dependence. This is accomplished more especially:

1st. By the speedy removal of the child from pauperizing and criminal influences and restoring it to healthy family life, where influences and opportunities are as favorable as for other children.

2d. By discouraging the dependence of children by their too ready reception into institutions and their long detention there.

3d. By the careful supervision of indentured dependent children during minority to secure good treatment and education.

The effect in this State has been to counteract the general increase of pauperism at a greater ratio than the increase of population. When this school was opened in 1874, there were about 600 dependent children in the State, mainly in the county poorhouses. It cost \$75 to \$100 per capita for their support by the counties. Our population was then 1,334,031. It is now at least 2,000,000. These children then cost the counties about \$50,000 annually. For 14 years the decrease in numbers and cost has been about 50 per cent., while the increase of the population has been 50 per cent. This shows that the effect of the State Public School is to save more each year to the State, financially, than the annual cost of its support. In other States child dependence has increased. It is doubtful whether any can show a decrease. Rhode Island, Minnesota and Wisconsin have adopted the Michigan system and can expect good results. But this economy can be better shown by a comparison, in which some of the most prominent States are selected, as New York, Penn., Mass., Ohio and California. In N. Y. and Cal. dependent children are mainly supported in sectarian asylums, at public expense. In Ohio about one-half of the counties have "Children's Homes," and the other counties keep their children, as most States yet do, in the county poorhouses. The county system prevails in part in Mass., while a portion of the

dependent, with delinquent children, are sent to the State Primary School at Monson. Illinois is a type of most of the States. She has 470 dependent children in the poorhouses, with 1,133 insane, 305 idiots, 118 blind, 27 deaf mutes, and 240 old soldiers. The number of dependent children in asylums, supported at public expense, in Ill., could not be ascertained from public reports. The comparative statistics given below are from official reports of 1887, except that in the case of Penn. the official reports do not show the extent of child dependence in that State. The number has been estimated by those in a situation to know, at about 10,000, including those in the Girard Institute.

If the number of these children and the cost of their support, to say nothing of the consequence of their neglect, were brought more prominently to public attention, it would go a great way to advance the cause of humanity and economy.

The following table shows the effects of the various systems in the States named in 1887:

State.	Estimated Population.	Number of Dependeat Children.	Ratio to Population.	Annual Cost in 1887.
New York.....	5,500,000	20,205	One to 263	\$2,050,000
Ohio.....	3,500,000	3,573	One to 1,000	312,354
California.....	1,000,000	3,600	One to 250	231,215
Pennsylvania.....	4,500,000	10,000	One to 450	1,000,000
Massachusetts.....	2,000,000	1,300	One to 1,500	130,000
Michigan.....	2,000,000	200	One to 10,000	35,000

The cost of the two systems in Ohio in 1887 is divided as follows:

Current expenses for children's homes.....	\$192,324 79
“ “ for children in infirmaries.....	120,029 50
Total in Ohio for 1887.....	\$312,354 29

The cost in the infirmaries is estimated at \$100 per capita, as no statistics are given. In Mass. the Monson school partakes of the character of the Michigan, except that delinquent children are received there, and pauper labor is employed in part.

The population of Michigan is about double that of California. At the same ratio of dependence of children to the population, the cost each year in Michigan would be \$462,429.80, and the number of dependent children would be 7,200.

Following the example of Ohio, with her Children's Homes and Infirmaries, Michigan would have 2,000 dependent children, costing annually \$200,000. Again, if New York should be the example, there would be here 7,600 to support, at a cost of \$760,000 yearly.

The large cities of New York and other states do not furnish the main factors in this remarkable dependency of children. The cause can be readily found, especially in New York and California, in the facilities afforded and the encouragement given, to placing children in sectarian or secular asylums over which and their long detention the State has no control. On the contrary the Michigan system discourages the abandonment of children to pub-

lic support, sends them early from institutions, and while young makes them self-reliant and in time self-supporting. When the child enters the State Public School, the parental control terminates and it passes into another home and begins a new life. The effect of this, as has often been seen, is that in many cases, the parents, knowing that their children will no longer be theirs, make greater efforts, retain them and save them from public dependence. In this way, the children in this Institution are those who are here from extreme poverty and the Institution is not made a convenience of by indolent or indifferent parents. But in California and New York, the child is placed in an asylum of the religion of its parents, and has long detention there. The parents believe there is a probability they may recover it at pleasure, and so part with it that they may be relieved of its support at the expense of the public. In this way encouragement is given to the establishment of sectarian asylums and they are multiplied for the purpose of receiving public support and to train children in the religion of the projectors. The following table shows how the public funds were distributed in California in 1887:

The Hebrews had 2½ per cent. of the children and 2¼ per cent. of the money					
The Protestants had 14½ per cent. of the children.					
and.....	11½	“	“	“	“
The secular had 20 per cent. of the children and 17 4-5	“	“	“	“	“
The Roman Catholic had 63½ per cent. of the					
children and.....	68	“	“	“	“

In 1885 in New York City—

The Roman Catholics received.....	\$814,357 18 or 63½ per cent. of the whole amount					
The Protestants and secular received.....	396,424 48	31	“	“	“	“
The Hebrews received...	71,874 79	“	5½	“	“	“

Total received in 1885.. \$1,282,656 45 to support dependent children.

The number of children supported in the city that year was 13,381. Outside the city that year the public paid for support of dependent children, mainly in sectarian asylums, \$1,974,755.30. This system increases remarkably child dependence, as the table below indicates. The law of New York, by which dependent children could be sent to sectarian asylums, took effect in 1875. In Kings county, in which Brooklyn is situated, there were then 300 dependent children. Note the increase for five years:

Years.....	1875	1876	1877	1878	1879	1880
Children.....	300	670	874	1,169	1,404	1,479

This increase in five years is 500 per cent. When the State Public School was opened in 1874, there were in the county poorhouses about 600 children under 16 years of age. Had the N. Y. or Cal. system then been adopted, and had the increase been the same, we should now have on hand 3,000 to support at an annual expense of \$300,000 annually. It is not strange that in a public convention in New York one speaker should say, “There should be no sectarian institution in the State supported by the public. . . The laws

making it obligatory to commit children to institutions which are controlled by the same religious faith as the parents of the child should be repealed. They have more than doubled the number of children to be supported."

This system is made worse in some cases by bad management. In Brooklyn, Kings county, in 1885, there were 1,231 dependent children, and for them \$115,830 were expended. The same year New York city, with only about double the population, had 13,764 dependent children, and paid for them \$1,282,656, eleven times as much money, and eleven times as many children.

When our law makers shall be seriously impressed that the prevention of crime and pauperism, by the proper treatment of neglected youth, is a work worthy of their best thought and labors, they will be ready to discharge as high a duty as they have for the interest of the youth and the State alike.

THE GREATER ECONOMY IN ITS HUMANITY.

There is probably no public institution where the *per capita* expense is less. But the Michigan system secures its greater economy by its preventive influences. The boy or girl saved here is rescued from years, it may be, of support in charitable or reformatory institutions. Many such children, unless rescued, would become the progenitors of a dependent or criminal race, entailing misery and expense which cannot be foretold. Degrading influences on impressible childhood are indelible and destructive. The State suffers a great loss by its youth in war, but a ten fold greater loss when it comes by evil or crime. The Michigan system is to save children. It is preventive, reasonable and natural. It is humane, and humanity and economy have no conflict. Prevention is safe and economical. Reformation is uncertain and punishment never restores self respect. It is far better to save a child than to reform or punish it. And that is the work Michigan is doing successfully and in this labor she is the pioneer.

HOME LIFE.

Michigan, by this school, is the special advocate of home life. This institution is made as near a family home as practicable. There are nine cottages for the children, presided over by a lady for each family. The children assist in the care of the cottages. They work on the farm and in the garden so far as their age and condition permit. They play and study like other children. They attend as good primary schools as any in the State. They are trained in good manners and taught religious truths. In all such ways they are fitted for good homes, where they are placed as soon as consistent with their physical and moral condition. They are placed in homes approved by the county agents. No child is placed or retained in a home without such approval. The indenture requires good treatment as a member of the family. By the county agents, the State agent, and reports from guardians, a careful supervision is kept up during minority. The child is withdrawn from the family if it is found at any time best to do so. They are not placed out as

NOTE.—Since the date of this report, the Supreme Court of Illinois has decided that the law of that State by which children dependent on the public can be sent to a sectarian asylum at public expense, is unconstitutional. The constitution of that State prohibits any aid from towns, school districts, counties, cities, or the State for any church or sectarian purpose, school, etc. The decision is interesting, and may have much to do by its effect in other States as well as in Illinois, to stay the tendency to increase child pauperism by sectarian influences.

servants. They are to have as fair a chance in life as the boys and girls in their neighborhood. Many may be only day laborers. It is so with those who are from other spheres in life. But they are to have opportunities to become self-reliant. They are placed mainly in country homes. The probabilities are better there. From that source come our best men and women. No institution can so develop the child as such a family home. The homes of any land are the highest test of its civilization. Some of the homes for these children may not be all that is desired; but the constant aim is, through county agents, the State agent, and otherwise, to secure the best grade of homes attainable.

APPROPRIATIONS FOR 1887 AND 1888.

In compliance with the recommendations of the Board the Legislature made the following appropriations in 1887:

CURRENT EXPENSES

For the years 1887 and 1888, respectively, \$35,000.

SPECIAL PURPOSES.

Repairs on buildings and painting	\$2,500 00
Brick laundry	2,500 00
Addition to the school-house.....	1,200 00
Repairs on steam and water works	500 00
Continuation of cement walks	500 00
Fencing and underdraining	500 00
Addition to horse barn.....	300 00
Library and current literature.....	200 00
Piano for kindergarten.....	300 00
Total.....	<hr/> \$8,500 00

The sums appropriated have been severally expended as provided. The buildings have been kept in good repair and a large amount of outside and inside painting has been done. A substantial brick laundry has been constructed in which a new upright engine, a new rotary washer, with appliances, machinery, etc. from the former laundry have been placed. The building is divided into appropriate rooms for convenience. It is well lighted and ventilated, and is in all respects admirably adapted to its purposes. In the basement are the large pumps which supply water for the mains and hydrants about the buildings and the tank in the water tower. All buildings are protected from fire by a system in some respects similar to the Holly.

Repairs have been made on the steam and water works, and the mains extended to the barns, with a hydrant at the termination. A regular system of fire alarms and methods of handling hose is maintained. Fortunately no serious losses by fire have occurred. Cement walks have been constructed, the longest from the hospital to the engine house, passing in the rear of the cottages. A substantial and tasty fence has been constructed on the south and west sides of the grounds. In front of the buildings, on the south, it is of woven wire, with cap and base, and it is the same on the western side. The rest of

the fence is of southern pine, which was delivered here at the same expense, nearly, as Michigan pine or whitewood. It is much stronger and more durable than Michigan white pine.

The addition has been made to the school-house, and has proved to be of great convenience.

A new piano has been placed in the chapel and the one formerly in the chapel has been put in the kindergarten. A large addition has been made to the library, making it necessary to add to the size of the case.

The supply of children's papers and magazines has been increased. There is now so large and well selected a library for both adults and children that no appropriation is requested for library purposes.

The appropriations for 1887 and 1888 have materially improved the condition and conveniences of the institution.

APPROPRIATIONS FOR 1889 AND 1890.

It is a source of gratification to the Board, that while the demands upon it are no less, while as many children are being received and placed in families as formerly, that not an increase in appropriations, but a decrease, is recommended in both current expenses and special. The following are the items recommended for the coming two years:

CURRENT EXPENSES.

For 1889 and 1890 respectively	<u>\$33,000 00</u>
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SPECIAL PURPOSES.

Repairs on buildings, painting, etc.	\$2,500 00
Two new boilers in the engine room and repairs and improvements on steam and water works	2,500 00
Furniture for cottages and main building	1,000 00
Completion of cement walks	500 00
	<hr/>
Total special	\$6,500 00

ESTIMATES APPROVED BY THE BOARD OF CORRECTIONS AND CHARITIES.

These estimates were properly submitted to the Board of Corrections and Charities, which Board, after visiting the institution and making full investigation, approved the several amounts for current expenses and special purposes, as above stated.

The amount for current expenses is \$2,000 and for special purposes also \$2,000 less than for 1887 and 1888, making a total reduction of \$6,000 over the present biennial period. This report is dated six months before the meeting of the legislature. It is possible that advances in prices and other causes may then indicate the necessity of a larger appropriation for current expenses. The appropriations should be sufficient to allow some margin for increased prices, the increase of children sent to the school, and any decrease of indentures, all of which is possible.

NEW BOILERS IN THE ENGINE HOUSE.

The only new work recommended is for the completion of the cement-walks and for improvements in the engine house.

The steam for heating, power and cooking is furnished by four boilers. Two are about 36 inches by twelve feet and two about 42 inches by twelve feet. They supply steam for nine cottages, the hospital, the schoolhouse, the main building for heating and cooking, and the laundry and the grinding and cutting machinery for power. The two smallest boilers have been in use since 1874, and have several times been repaired by putting on new heads. Since the last two were put in, the laundry, hospital, and grinding and cutting machinery at the barn have been added. To supply the additional steam required the boilers have been crowded to their injury and to the loss of fuel. It is proposed to put in two tubular horizontal boilers of 50 H. P. each in the place of the two oldest boilers, giving a capacity equal to the requirement. One of the smaller old boilers would be used for a larger water heater, which is needed. This arrangement, it is believed, will reduce the amount of fuel required and secure the proper heat and power without overcrowding the boilers.

THE IMPORTATION OF DEPENDENT CHILDREN DISCONTINUED.

Important legislation affecting dependent children and our State institutions has originated at this institution. The law "For the Protection of Children," which provides, among other things, that no child admissible to this school shall be kept in a county poorhouse, originated here. So did the statutes for "The Uniform Regulation of State Institutions," and "For the Medical and Surgical Treatment of Dependent Children, at the University Hospital." From the same source, at the request of the Board of Corrections and Charities, came the statute amending the law "For the Protection of Children;" regulating the indenturing of all dependent children, so that foreign societies or non-residents must comply with similar regulations that govern the State Public School in placing children in families and supervising them. They must place them in homes approved by the county agent and on proper indenture. The effect of this statute has been, as expected, to prevent the importation of dependent children from other States; under which system heretofore children left in improper homes under no written contract soon drifted away, and many were soon supported by the public in pauper or reformatory institutions. But the statute does not prohibit. It regulates only and in that way protects the child and the State. The enactment of this statute will doubtless aid in reducing child pauperism and delinquency in this State.

ILL-TREATED CHILDREN.

There is no law in this State by which ill-treated—not dependent—children can be taken from their parents or guardians and placed under the protection of public authority. There are occasionally cases of serious ill treatment which demonstrate that only ruin, mental and physical, can come to the child if left under parental control. And yet the law can only punish the parent for the ill-usage proven, and the child is left in the same place, and

the offense is repeated, and the child goes on to ruin. There are cases of extreme cruel treatment of which the law might properly take cognizance. They are those cases where the child is put in peril of its health, morals or life, by continued brutal personal injury, or by the grave misconduct or habitual intemperance of the parents. Or when the child is reared with vagrants, mendicants, in dance houses, houses of prostitution, with professed thieves and gamblers, in drinking and gambling saloons, there is cruel treatment from which the child should be amply protected by the strong arm of the law, supported by a healthy public sentiment. In the last biennial report this Board recommended, as it does now, the enactment of a statute by which, in cases of extreme habitual cruel treatment, children may be removed from their parents or guardians, and when of suitable age and of bodily and mental health, may be placed in the State Public School. There is room for them here, and this class of children need the protection of public authority full as much as those who have only poverty to give them admission. The serious attention of the legislature is solicited to this subject.

WORTHY OF BRIEF MENTION.

The sanitary condition in the buildings and on the premises is all that could be desired. Thorough sewerage by large iron pipes in and near the buildings, trapped and ventilated by approved methods connecting with the tile drain, removes all sewage, including laundry and storm water, to the creek a mile and a half away. The pipes are flushed from the water main several times a week, and nothing is permitted to remain that can make the water or air impure. The general health of the children has been excellent. For the third year the medical treatment has been by resident lady physicians, graduates of the medical department of the Michigan University. Dr. Wealthy Dibble and Dr. Ella Marx have occupied the position, and Dr. Kate Snyder will do the work the coming year. The presence of a physician at all times, especially for the earliest possible treatment of a child, has many advantages. The system has proved very beneficial and satisfactory.

Milk is largely used for the children, and the fine herd of Holstein and grade cows continues to furnish a pure and sufficient supply. The number of full blood Holsteins is increasing by breeding, so that before long it is probable there will be here a full herd of that stock so valuable for milk purposes.

The manufacture of gas for the use of the institution at a cost of less than \$300 per year, including supplies, labor and repairs, costing about 70 cents per thousand feet, continues to be as satisfactory as at first. The gas is made from crude petroleum, is fixed and its chemical qualities are similar to that made from coal. It is purer and the flame is whiter and more brilliant. No light from electricity or other method can be more economical and satisfactory for all purposes.

This institution since its establishment has been largely formative in its condition. It is believed that now there are here all necessary grounds, buildings and appliances for this work for the present. In time improvements may be required. But it is the hope of the Board that construction work will not for some time detract from the main object, work for the children, caring for and educating them here, placing them in homes and supervising them, securing their good treatment and education. The ideal

of the school, in the mind of the Board, has not been attained. Continual effort will be made to reach still better results in the future in economy and efficiency.

PERSONAL INSPECTION SOLICITED.

A more thorough knowledge of all State institutions would be of great advantage to them and the people. This institution is very frequently visited by our own people and others. Such visits are of mutual advantage. The Board of Control respectfully requests by you and the people and press of the State, a personal inspection of the institution. The ample records and vouchers are always in condition to be seen. The more that is known of the school the greater will be its possibilities for usefulness. The uniform friendship of the legislature and the people for this school comes from a knowledge of the work and its success and has always been a source of encouragement.

We solicit the continuance of your good will for the children in our care, and that personal and official friendship which will insure the proper maintenance and development of the important trust in our keeping. We have the honor to be,

Respectfully yours,

I. A. FANCHER,
R. E. CASE,
C. D. RANDALL,
Board of Control.

C. D. RANDALL, *Secretary.*

APPROVAL OF ESTIMATES.

STATE OF MICHIGAN,
BOARD OF CORRECTIONS AND CHARITIES, }
Lansing, Oct. 4, 1888.

To the Board of Control of the State Public School, Coldwater:

GENTLEMEN:—The Board of Corrections and Charities, having received the estimates for current expenses and for special appropriations for your institution for the years 1889 and 1890, and having visited the school and examined in reference to the several matters desired, respectfully report as follows:

The amount asked for “current expenses” \$33,000 for each year, is \$2,000 less than that asked for the like item two years ago. The effort of your board to keep down the number of inmates has been successful, so that you can estimate such number at about the same for each of the past two years. You are to be congratulated on this result of your labors, and on your efforts to curtail expenses even on that basis, to the amount of \$2,000. In our opinion, the sum asked for “current expenses” viz: \$33,000 for each year of 1889-90, is reasonable and has our approval.

For repairs and painting.....\$2,500.

The repairs indicated and the painting of the buildings contemplated by this proposed appropriation, in the opinion of this Board, are necessary and are approved.

Furniture, bedding and carpets..... \$1,000

Completion of cement walks..... 500

are, in the opinion of this board, necessary and the amounts reasonable, and are approved.

Two new boilers, re-setting old boilers, additional steam pipe
and covering.....

\$2,200, and

General repairs on steam and water works..... 300,

are approved.

Very respectfully,

GEO. D. GILLEPSIE,

Chairman.

L. C. STORRS, *Secretary.*

TREASURER'S REPORT.

OFFICE OF THE TREASURER OF THE STATE PUBLIC SCHOOL, }
Coldwater, June 30, 1888. }

To the Board of Control:

The undersigned, the Treasurer of the State Public School, in compliance with law, hereby respectfully submits his biennial report of the receipts and disbursements in his office covering the fiscal period of nine months, closing June 30, 1887, and the fiscal year closing June 30, 1888, as follows:

Current Expenses for the Fiscal Period closing June 30, 1887.

Debit.	Credit.
June 30, 1887: To vouchers paid during nine months. \$23,044 00 To balance on hand June 30, 1887..... 1,427 04 \$27,471 04	June 30, 1887: By balance on hand Sept. 30, 1886..... \$54 92 By cash rec'd from the State Treasurer during the nine months..... 27,250 00 By cash received from other sources... 166 12 \$27,471 04

Current Expenses for the Fiscal Year closing June 30, 1888.

Debit.	Credit.
June 30, 1888: To vouchers paid during the fiscal year..... \$36,282 59 To balance on hand June 30, 1888..... 203 40 \$36,485 99	June 30, 1888: By balance on hand June 30, 1887..... \$1,427 04 By cash received during the year from the State Treasurer..... 35,000 00 By cash received from other sources... 58 95 \$36,485 99

SPECIAL FUNDS APPROPRIATED BY THE LEGISLATURE OF 1887. REPAIRS ON BUILDINGS, PAINTING.

Debit.	Credit.
June 30, 1888: To vouchers paid \$2,500 00	June 30, 1888: By cash from the State Treasurer.... \$2,500 00

BUILDING A BRICK LAUNDRY.

June 30, 1888: To vouchers paid \$2,500 00	June 30, 1888: By cash from the State Treasurer..... 2,500 00
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TREASURER'S REPORT.

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ADDITION TO THE SCHOOL HOUSE.

June 30, 1888: To vouchers paid.....	\$1,200 00	June 30, 1888: By cash from the State Treasurer.....	\$1,200 00
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PLANO FOR THE KINDERGARTEN.

June 30, 1888: To vouchers paid.....	\$300 00	June 30, 1888: By cash from the State Treasurer.....	\$300 00
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REPAIRS ON STEAM AND WATER WORKS.

June 30, 1888: To vouchers paid.....	\$500 00	June 30, 1888: By cash from the State Treasurer....	\$500 00
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ADDITION TO THE HORSE BARN.

June 30, 1888: To vouchers paid.....	\$300 00	June 30, 1888: By cash from the State Treasurer.....	\$300 00
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LIBRARY AND CURRENT LITERATURE.

June 30, 1888: To vouchers paid.....	\$192 68	June 30, 1888: By cash from the State Treasurer.....	\$200 00
To balance on hand.....	7 32		
	<u>\$200 00</u>		<u>\$200 00</u>

FENCING AND UNDERDRAINING.

June 30, 1888: To vouchers paid.....	\$294 77	June 30, 1888: By cash from the State Treasurer.....	\$300 00
To balance on hand.....	5 23		
	<u>\$300 00</u>		<u>\$300 00</u>

CEMENT WALKS.

June 30, 1888: To vouchers paid.....	\$500 00	June 30, 1888: By cash from the State Treasurer.....	\$500 00
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RECAPITULATION.

Received for repairs and painting from Sept. 30, 1886, to June 30, 1888.....		\$2,500 00
Received for building a brick laundry from Sept. 30, 1886, to June 30, 1888.....		2,500 00
Received for addition to the school-house from Sept. 30, 1886, to June 30, 1888.....		1,200 00
Received for plano for the kindergarten from Sept. 30, 1886, to June 30, 1888.....		300 00
Received for repairs on steam and water works from Sept. 30, 1886, to June 30, 1888.....		500 00
Received for addition to the horse barn from Sept. 30, 1886, to June 30, 1888.....		300 00
Received for library and current literature from Sept. 30, 1886, to June 30, 1888.....		200 00
Received for fencing and underdraining from Sept. 30, 1886, to June 30, 1888.....		300 00
Received for cement walks from Sept. 30, 1886, to June 30, 1888.....		500 00
Total amount received for special purposes.....		<u>\$8,300 00</u>
Total amount expended for special purposes.....	\$8,287 45	
Balance on hand June 30, 1888.....	12 55	
	<u>\$8,300 00</u>	<u>\$8,300 00</u>
Balance in the State Treasury June 30, 1888, for fencing, etc., not drawn.....		200 00
Total special appropriations for 1887 and 1888.....		<u>\$8,500 00</u>

STATE PUBLIC SCHOOL.

KITTIE BAGLEY FUND.

June 30, 1888:
To this amount invested on real estate
mortgage, with interest payable an-
nually at seven per cent.....\$1,000 00

\$1,000 00

June 30, 1888:
To this amount expended for Christmas
presents in 1886\$11 08
For Christmas, 1887.....70 00
\$81 08

June 30, 1888:
By this amount received in 1880 from
Gov. and Mrs John J. Bagley, to be
held in trust by the Board of Control,
the interest to be expended each
Christmas for the individual benefit
of the children of this school, the gift
to be a perpetual fund in memory of
Kittie Bagley, a daughter of the
donors, and to be known as the Kittie
Bagley Fund.....\$1,000 00

\$1,000 00

June 30, 1888:
By this amount received for interest
since Sept. 30, 1886.....\$81 08
\$81 08

The mortgage having been paid in 1886 the fund was not re-loaned for some months for want of a satisfactory opportunity. The shortage in interest is in part apparent, as the fund drew interest from March 22, and was advanced each year by the treasurer for Christmas purposes.

The fund is now invested on a five year real estate mortgage. It being a special trust in the Board the receipts and disbursements are not reported to the Auditor General. Vouchers for all such disbursements are on file in this office.

GENERAL R. A. ALGER'S FUND.

For Christmas in 1886 and in 1887, Gen. R. A. Alger gave each time \$100, to be used for the purchase of presents for the children. This generous gift, twice bestowed, aided very materially in procuring ample presents for the children, and made those Christmas days very enjoyable ones for them. Vouchers are on file for the disbursement of this \$200.

For all payments for current expenses and special purposes duplicate vouchers are made, one of which in each case, is filed in this office and the other with the Auditor General. Vouchers for all payments can be found here and at the office of the Auditor General.

The Treasurer of the Board settles once each quarter with the Auditor General and once each year with the Board of State Auditors.

There has been no deficit to report during the past twelve years. There has never been a deficit in the current expense account and only in the construction disbursements in the early history of the School.

Respectfully submitted.

C. D. RANDALL,
Treasurer.

SUPERINTENDENT'S REPORT.

To the Hon. Board of Control of the State Public School,

GENTLEMEN:—I have the honor to submit herewith for your consideration the report of the Superintendent of the State Public School for the fiscal nine months ending June 30, 1887, and for the fiscal year ending June 30, 1888. Owing to the change in time of closing of the fiscal year from September 30 to June 30, the “biennial period” covered by this report includes 21 months only.

In making comparisons this fact should be borne in mind. The most important statistical information for this period, together with comparative data, will be found embodied in the following 29 tables, which will afford much information and will bear close study.

TABLE 1.—*Current Expenses for the year (9 months) ending June 30, 1887.*

Debit.		Credit.	
Inventory, Oct. 1, 1886.....	\$15,489 74	Inventory, July 1, 1887.....	\$13,933 11
Bills payable, July 1, 1887.....		Cash on hand July 1, 1887.....	1,593 16
Amount expended for fiscal nine mos.	26,044 00	Net current expense.....	20,007 47
Total.....	\$41,533 74	Total.....	\$41,533 74

TABLE 2.—*Current Expenses for the year ending June 30, 1888.*

Debit.		Credit.	
Inventory, July 1, 1887.....	\$13,933 11	Inventory, July 1, 1888.....	\$16,699 88
Cash on hand July 1, 1887.....	1,593 16	Cash on hand July 1, 1888.....	203 40
Amount expended for fiscal year.....	36,282 59	Net current expense.....	34,905 58
Total.....	\$51,808 6	Total.....	\$51,808 86

TABLE 3.—*Classified Statement of Current Expenses*

Months.	Totals.	Bedding	utter, lard and eggs.	Clothing.	Fuel.	Furni- ture.	Farm and barn.	Flour and meal.	Groceries.
October, 1886.....	\$556 42	-----	-----	\$43 85	\$440 77	-----	\$40 20	-----	-----
November, 1886.....	4,682 97	\$70 24	\$97 82	770 76	2 10	\$25 85	334 38	\$46 09	\$363 82
December, 1886.....	4,614 84	-----	160 55	1,408 12	401 31	45 02	56 54	156 70	23 52
January, 1887.....	1,600 71	-----	-----	64 07	882 88	1 73	822 08	96 11	3 68
February, 1887.....	3,328 08	58 63	80 99	230 18	833 93	68 67	78 45	59 85	163 64
March, 1887.....	3,652 37	-----	68 60	331 11	333 87	53 98	116 70	115 06	42 67
April, 1887.....	2,060 52	-----	80 83	213 47	106 72	5 35	258 95	109 43	12 20
May, 1887.....	1,898 86	6 02	95 77	298 39	552 18	28 60	83 12	100 77	237 86
June, 1887.....	3,639 73	9 21	44 38	534 02	-----	61 22	300 86	106 30	39 84
Totals.....	\$26,044 00	\$139 10	\$623 94	\$3,943 47	\$3,554 66	\$290 37	\$1,591 28	\$790 31	\$887 25

TABLE 4.—*Classified Statement of Current Expenses*

Months.	Totals.	Bedding	Butter, lard and eggs.	Clothing.	Fuel.	Furni- ture.	Farm and barn.	Flour and meal.	Groceries.
July, 1887.....	\$914 82	\$6 72	\$57 02	\$82 55	-----	\$10 95	\$294 14	-----	\$4 22
August, 1887.....	3,088 46	-----	135 26	378 31	-----	45 42	164 32	\$105 62	50 21
September, 1887.....	6,012 32	24 30	13 65	332 32	\$1,148 70	106 88	369 93	58 75	235 05
October, 1887.....	1,960 85	40 31	62 95	361 95	606 94	10 92	181 37	96 95	6 46
November, 1887.....	3,911 38	19 27	190 76	584 56	919 11	107 59	219 15	163 13	305 40
December, 1887.....	2,700 00	11 39	89 77	310 00	77 81	19 89	311 28	70 22	13 97
January, 1888.....	2,969 75	12 06	-----	663 32	211 16	14 27	150 28	154 40	160 08
February, 1888.....	2,072 03	5 58	70 20	375 21	191 35	31 27	145 53	-----	19 63
March, 1888.....	3,984 06	6 12	148 12	530 12	643 14	56 87	142 90	1 75	17 52
April, 1888.....	1,436 74	25 84	-----	585 84	3 30	44 75	127 47	-----	299 34
May, 1888.....	2,561 05	-----	89 44	179 32	503 64	6 09	246 73	188 39	10 43
June, 1888.....	4,691 13	3 00	126 10	444 64	308 78	123 74	323 86	87 42	31 62
Totals.....	\$26,282 59	\$155 09	\$963 27	\$4,833 64	\$4,608 93	\$579 24	\$2,676 96	\$926 68	\$1,143 93

for the year (9 months) ending June 30, 1887.

Hospital stores.	Lights.	Meat and fish.	Miscellaneous.	Officers and employes.	Printing, stationery and postage.	Repairs and permanent improvements.	Schools.	Vegetables and fruits.	Milk.	Live stock.
			\$8 10				\$17 00	\$7 00		
		\$110 28	304 48	\$1,708 22	\$2 50	\$380 20	804 70	116 55		
\$52 34		40 98	274 08	891 04	187 26	673 74	184 74	58 90		
1 50			118 78	50 96	16 00	17 82	29 15	1 00		
61 16		192 04	262 64	897 51	33 50	168 18	140 10	18 61		
20 29		63 23	201 85	1,697 12	30 29	176 86	254 83	152 46		
4 75		89 51	151 58	851 40	2 44	47 97	123 32	60		
34 51		111 80	176 15	83 58	38 60	38 20	39 23	23 51		
6 25		170 17	870 46	1,628 89	57 71	15 81	254 21	40 90		
\$180 80		\$777 99	\$1,863 12	\$7,753 72	\$368 30	\$1,518 88	\$1,346 78	\$414 53		

for the year ending June 30, 1888.

Hospital stores.	Lights.	Meat and fish.	Miscellaneous.	Officers and employes.	Printing, stationery and postage.	Repairs and permanent improvements.	Schools.	Vegetables and fruits.	Milk.	Live stock.
\$17 00		\$6 92	\$141 00	\$52 62	\$1 53	\$232 34	\$3 00	\$4 81		
85 18	\$61 87	95 95	374 41	869 25	201 85	453 99	62 75	34 57		\$30 00
7 69	181 65	77 98	1,352 99	1,738 91	70 61	94 31	188 88	64 92	\$4 80	
24 83		80 66	282 70	31 85	9 50	93 91	23 30	5 75		40 00
		142 06	158 33	851 51	34 80	46 71	125 07	43 93		
16 86		164 68	116 51	844 88	78 35	57 53	175 84	341 02		
11 64		29 82	440 27	814 16	89 40	20 96	190 96	21 97		
		11 72	103 87	865 54	24 10	16 56	211 97			
38 52		139 06	155 98	1,643 22	46 10	34 16	230 22	50 26		
35 17		28 09	184 80	9 11	22 25	16 36	3 80	51 12		
5 88		111 86	95 46	901 20		18 14	173 23	30 14		
60 81	57 61	161 84	867 50	1,849 51	114 61	238 64	312 25	84 70		
\$253 58	\$301 18	\$1,050 14	\$3,772 82	\$10,471 76	\$692 60	\$1,323 61	\$1,701 27	\$733 19	\$4 80	\$70 00

TABLE 5.—Abstract of Expenditures for

Years.	Totals.	Bedding.	Butter, lard and eggs.	Clothing.	Fuel.	Furniture.	Farm and barn.	Flour and meal.	Groceries.
1874.....	\$11,896 91	\$1,162 17	\$159 77	\$494 59	\$655 80	\$697 18	\$337 58	\$179 81	\$708 07
1874-5.....	28,408 49	475 83	655 50	4,322 37	2,846 03	1,110 82	609 71	1,393 63	1,726 72
1875-6.....	27,162 06	262 46	619 41	2,773 06	3,322 38	719 56	739 26	1,643 36	1,906 21
1876-7.....	32,825 50	118 00	963 15	4,524 61	2,472 79	633 24	751 94	2,750 03	2,322 96
1877-8.....	34,936 16	229 02	836 72	3,601 68	3,742 53	838 41	952 74	2,270 30	2,493 26
1878-9.....	35,546 15	232 24	1,034 59	3,513 80	5,272 91	806 12	828 87	1,879 35	2,819 79
1879-80.....	35,173 22	71 33	911 39	3,996 99	3,863 95	586 79	1,316 02	2,363 72	2,525 73
1880-1.....	37,906 20	279 39	868 42	6,174 02	4,472 82	651 48	1,243 58	2,296 39	2,599 03
1881-2.....	36,463 77	79 94	893 20	5,061 21	5,419 12	522 72	1,754 90	2,351 41	1,994 95
1882-3.....	36,597 05	111 66	840 34	4,679 83	5,247 17	613 55	1,753 09	2,204 03	1,800 56
1883-4.....	36,536 90	218 57	838 64	2,976 08	4,954 04	607 64	2,684 45	1,862 04	1,547 39
1884-5.....	39,003 74	137 41	844 58	3,306 76	5,663 00	237 24	2,323 69	1,153 38	1,082 20
1885-6.....	39,053 94	47 69	727 06	4,304 26	3,849 65	473 41	2,993 74	1,194 68	1,451 07
*1886-7.....	26,044 00	139 10	623 94	3,938 87	3,523 64	325 99	1,591 23	790 31	887 25
1887-8.....	36,232 59	155 09	963 27	4,833 64	4,608 93	579 24	2,676 96	926 63	1,143 98

* For nine months from Oct. 1, 1886, to June 30, 1887.

each year since the institution opened.

Hospital stores.	Lights.	Meat and fish.	Miscella- neous.	Officers and em- ployés.	Printing, stationery and post- age.	Repairs.	School.	Vegetables and fruits.	Milk.	Live stock.
\$126 15	\$1,002 84	\$285 54	\$899 21	\$4,168 08	\$114 43	\$207 57	\$105 81	\$249 84	\$196 77	\$173 75
262 94	-----	1,625 49	951 58	10,584 40	187 48	184 98	150 18	820 81	984 77	65 80
139 50	739 40	1,859 35	970 78	10,096 46	263 10	235 27	305 44	822 06	795 72	99 80
284 23	1,026 81	1,449 85	1,289 42	11,994 31	281 85	170 85	322 08	515 59	862 29	92 50
104 08	1,162 50	1,256 33	1,597 92	18,121 48	278 05	803 94	273 88	830 89	1,005 51	86 00
85 84	884 70	1,519 55	1,520 44	12,242 93	244 09	752 52	202 80	413 56	1,802 05	-----
439 62	1,062 07	1,715 32	1,075 90	10,268 74	303 86	1,514 74	1,011 32	742 64	1,403 07	-----
220 11	950 55	1,705 66	1,867 70	9,025 82	218 33	1,604 15	1,916 96	891 75	914 97	-----
134 07	1,946 36	1,598 24	1,586 98	7,953 18	200 04	1,599 99	1,637 89	1,145 15	584 42	-----
209 33	369 96	1,333 87	1,834 58	9,968 58	328 41	1,890 42	1,789 05	554 66	296 09	781 87
303 53	84 40	1,623 78	2,160 74	10,184 80	477 57	5,710 17	1,705 18	478 75	49 13	120 00
457 75	341 87	1,196 58	2,813 27	10,417 16	455 84	6,092 19	1,840 94	477 99	73 89	115 00
311 06	283 71	1,163 61	3,524 04	10,965 19	479 76	4,305 18	1,675 40	311 23	-----	968 80
180 80	-----	777 99	1,863 12	7,753 72	368 30	1,518 38	1,346 73	414 53	-----	-----
253 58	301 18	1,050 14	3,772 82	10,471 76	692 60	1,323 61	1,701 27	733 19	4 80	70 00

TABLE 6.—*Number received*

Counties.	1874.		1874-5.		1875-6.		1876-7.		1877-8.		1878-9.		1879-80.	
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
Alcona.....	1	2												
Allegan.....	2	3			2	2	4	2	4		1	1	7	4
Alpena.....								3						
Antrim.....										1				
Barry.....	1		1				2	2	1	2	1		1	
Bay.....		1	1	1	3				2	2			2	
Benzie.....			1											
Berrien.....	7	3	3	1	2		2		4	2	1	5	6	7
Branch.....	3		10	1	2	5	1		2		3	1	5	2
Calhoun.....	10	2	2		7	3			4	4	3		6	2
Cass.....	6	2			4			1	3		1	2	2	2
Cheboygan.....									2		1	1	1	1
Chippewa.....														
Clare.....														
Clinton.....				1		1					2	1		
Crawford.....														
Delta.....									2					
Eaton.....	1	1	1	3	1		3	1	3				5	1
Emmet.....														
Genesee.....	1	1	2	3	4	1	5	1	3		3	3	5	2
Grand Traverse.....		1	1							1				
Gratiot.....	1				1		2						2	
Hillsdale.....				1	4		2	1	3	1	1	1		
Houghton.....	3	3			2	1			3	3			3	3
Huron.....									2				5	2
Ingham.....	4		1	2	1	1				2	4		2	
Ionia.....		1	1		1	1			3	2	2			
Iosco.....								1	1		1			
Iron.....														
Isabella.....					2							2	2	1
Jackson.....	4	3	1	2	3	1	2		2	2	2		5	1
Kalamazoo.....	3	2	2	3	4		2	1	6				4	2
Kalkaska.....														
Kent.....	7	1			9	5	1	2	9	4	3		13	5
Keweenaw.....	2	2												
Lake.....							1	1	2	1				
Lapeer.....	1		2		1	1			1	3	3	3	2	
Lenawee.....	5	3	2	2	4	2	1	4	3		3	1	1	

from each county.

1880-1.		1881-2.		1882-3.		1883-4.		1884-5.		1885-6.		1886-7*.		1887-8.		Totals.		
Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Whole No.
																1	2	3
		3		5		3	3	2		1		2	1	4	1	40	17	57
1		2		2	3		2	3						2	2	10	10	20
										2	2					2	3	5
1				1		5	5	9	3	2	2	1	1		1	26	16	42
		1	4	8	4	2		4			1	1				24	13	37
																1		1
2	4	3	1	5	3	9	2	3	1	2		3	2	1	1	53	32	85
3		2	1	1		3	4	5	3	6	2	5	2	2	1	58	22	80
3	4			1	3	4	5	3	4	6	3	4	3	1	2	54	40	94
4	2	1		1		6		2	4	1	5	3	1	9	3	48	22	65
	2	1	1	3	1	3	1			3	1		1			14	9	23
				2												2		2
							2					1				1	2	3
	1	1	2			3	4	2	1	1		2		1	1	17	12	29
										4						4		4
										2						4		4
1	3	2	2	1	1	4		5	2	6	3	4	1	4	1	46	19	65
						2	2			3	2	1	2	2	3	8	9	17
7	1	3	1	3		4				3	3		2	2	2	45	20	65
				1			1	1	1		2	2	2			5	8	13
2	1	3	1	1	2	2			4	1	1	1	1	4	2	20	12	32
2		6	5	5	1	6	3	3	3	3	1			4	1	39	18	57
																11	10	21
	1					1		1	1					1		10	4	14
3						2	2	6		4	3	4	2	2	1	33	13	46
1		4		1		4				5	1			2		24	5	29
3									1			3	1	1		9	3	12
													1				1	1
	2					6	1	5	2	1		2				18	8	26
4	4	4	2	5	5	14	3	7	3	11	6	4		6	2	74	34	108
3	1	6	1	5	2	5		7		3		1		4		55	12	67
				1	4		1									1	5	6
1	6	3	3		1	12	5	15	3	21	4	9	6	13	4	116	54	170
								3								5	2	7
2				2		4	6			1	3	1	1	1		14	12	26
2	2	2	5	1	1	6	1	7	1	1	2	4	7			33	26	59
10	1		2	7	4	8	5	7	3	6	3	2	1	10	3	69	34	103

* For nine months only—from October 1, 1886, to July 1, 1887.

. TABLE 6—Continued.

Counties.	1874.		1874-5.		1875-6.		1876-7.		1877-8.		1878-9.		1879-80.	
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
Livingston	1						1				2		1	
Mackinac														
Macomb					1		2		1		4		3	
Manistee	5	3				1								
Marquette	2	1	5	3	6	6	1	2	5	2				
Mason	1				2	2			2	1		1	3	1
Mecosta							2	2	1	1	2		1	1
Menominee									2	1				
Midland	5					2	2						3	1
Missaukee														
Monroe			1	1	4	2	1			4				
Montcalm	2	1		1		2	2		2		2		3	
Muskegon	2		1	1	3		2		1	2			1	
Newaygo	2						1				2			
Oakland					2		1	1	6		1	2		
Oceana		1					1							
Ogemaw														
Ontonagon	2								1	1				
Osceola	2		1	1	2	2		1	2					2
Otsego														
Ottawa			2	1	3	1			1	1				1
Presque Isle														
Saginaw			3			2	3	2	2	3		2	3	1
Sanilac														
Schoolcraft														
Shiawassee	1	3	2	2	3			2			3			1
St. Clair	3				4		2		1	3	3	1		
St. Joseph	5		1		4		2		2	2	1	7	2	4
Tuscola	2	3				1					2	1	2	1
Van Buren			1	2	5	1	2	1		1	1		2	
Washtenaw	3		3		3	2			2		3	1	3	
Wayne	3	4	3	1	3	5	10	2	5	1	2	2	3	6
Wexford					1		1			1				
Totals	113	47	59	33	106	53	64	33	103	54	68	33	114	54

TABLE 6—Continued.

1880-1.		1881-2.		1882-3.		1883-4.		1884-5.		1885-6.		1886-7.*		1887-8.		Totals.		
Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Whole No.
3	---	---	1	2	---	1	---	---	---	---	---	2	4	1	---	14	5	19
---	---	---	---	---	---	---	---	2	---	1	2	---	---	---	---	3	2	5
1	1	2	2	---	---	---	---	1	---	1	2	2	2	---	---	18	7	25
---	---	---	---	---	---	---	---	1	---	---	---	1	1	2	---	9	5	14
3	---	2	1	1	---	4	1	---	1	3	---	---	---	2	2	34	19	53
2	---	3	2	5	---	2	1	---	1	6	1	1	1	3	2	30	12	42
---	---	1	1	2	1	3	1	1	---	6	3	3	2	1	---	23	12	35
---	---	2	2	---	---	2	---	3	1	1	2	---	---	2	1	12	7	19
---	---	1	---	---	---	1	---	---	---	1	---	---	---	2	2	15	5	20
---	---	---	---	---	---	---	---	---	---	---	---	1	3	---	1	1	4	5
---	---	---	---	---	---	1	---	1	---	3	1	2	---	3	2	16	10	26
---	2	2	2	2	---	6	2	3	2	3	2	2	---	4	1	33	15	48
1	---	3	---	4	---	3	3	9	2	2	---	2	---	1	1	35	14	49
---	---	---	---	1	4	11	3	1	---	3	2	3	---	2	---	26	9	35
4	---	2	2	---	2	1	---	1	---	3	1	---	---	---	---	21	8	29
1	---	2	---	---	---	2	2	1	1	---	---	3	1	---	---	10	5	15
---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	2	1	2	3
---	---	1	---	---	---	---	---	---	---	2	1	---	---	---	---	6	2	8
1	1	---	---	2	---	1	---	---	---	2	2	2	---	1*	---	16	9	25
---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	---	1	---	1
---	---	1	1	4	1	---	---	---	---	1	1	---	---	1	1	13	8	21
---	---	---	---	---	---	---	---	---	---	2	2	---	---	---	---	2	2	4
5	3	6	1	2	---	4	2	3	4	4	1	5	2	---	1	40	24	64
---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	---	1	---	1
---	---	---	---	---	---	---	---	1	---	---	---	1	---	---	---	2	---	2
3	1	---	1	---	---	11	6	1	---	2	1	4	---	1	1	31	18	49
---	---	1	2	---	2	4	2	---	---	---	---	---	---	2	3	25	18	43
3	1	2	---	4	3	1	---	---	---	---	---	---	---	1	1	23	18	46
---	---	2	1	---	---	4	3	---	---	5	3	3	1	1	1	21	15	36
---	2	5	---	2	---	3	5	3	3	11	4	4	---	4	4	43	23	71
1	1	5	1	3	3	2	1	---	---	3	2	1	1	1	1	33	13	51
6	1	10	---	1	2	---	---	---	---	10	3	15	3	10	5	101	35	136
---	---	---	---	---	---	---	---	1	1	2	---	5	---	1	1	11	3	14
39	43	100	51	97	53	195	95	133	61	131	91	*122	*53	125	69	1674	833	2512

*For nine months only—from Oct. 1, 1886, to July 1, 1887.

STATE PUBLIC SCHOOL.

TABLE 7.—Showing work done for past two years. Number received, indentured, adopted, married, etc.

Facts Reported.		* 1886-87.		1887-88.		Totals.	
Number received {	By order of Probate Court.....	180 {	270	194 {	824	374 {	594
	Returned from homes	90 }		180 }		220 }	
" indentured {	For first time	147 {	244	184 {	802	831 {	546
	Reindentures.....	98 }		117 }		215 }	
" on trial at the close of each year.....			88		120		
" adopted.....			13		25		38
" married.....			2		6		8
" died {	At the School.....	1 {	6	2 {	6	3 {	12
	In homes	5 }		4 }		9 }	
" declared self-supporting.....			24		81		105
" restored to parents.....			87		40		77
" returned to counties from which they came.....			24		82		56
" who have become of age.....			8		4		12
" remaining in the School June 30.....			218		185		

*For nine months only—from Oct. 1, 1886, to July 1, 1887.

TABLE 8.—Showing disposition of all children received since the school opened.

Facts Reported.	Number receiv'd.	How disposed of.
Number received for fifteen years.....	2,512	
" subject to visitation, June 30, 1888.....		873
" adopted by proceedings in Probate Court.....		188
" married.....		36
" who have died at the School and in homes.....		84
" declared self-supporting.....		267
" restored to parents		310
" returned to counties from which they came.....		309
" who have become of age.....		140
" belonging (children present and on trial) June 30, 1888.....		305
Totals.....	2,512	2,512

TABLE 9.—Record of children indentured since the school opened.

Facts Reported.	Number Indentured.	How disposed of.
Number of children indentured.....	1,885	
" on indenture subject to visitation, June 30, 1888.....		873
" on trial " " " " ".....		49
" adopted by proceedings in Probate Court		112
" married.....		36
" who have died		24
" declared self-supporting.....		267
" restored to parents.....		214
" returned to the counties from which they came.....		149
" who have become of age.....		140
" returned to and remaining in the School.....		21
Totals.....	1,885	1,885

TABLE 10.—Daily number belonging (children present and on trial) for the year (9 months) ending June 30, 1887.

Day.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April.	May.	June.
1.....	317	316	301	319	322	325	337	332	317
2.....	318	314	300	319	319	325	340	332	317
3.....	318	313	303	318	320	326	340	331	316
4.....	317	314	303	314	328	328	339	333	313
5.....	314	315	303	314	330	327	338	333	313
6.....	311	312	304	314	330	327	333	331	309
7.....	314	312	304	317	331	324	335	332	308
8.....	315	309	306	315	332	324	335	332	313
9.....	316	305	307	315	333	326	333	329	312
10.....	315	302	309	315	331	327	333	327	312
11.....	314	302	306	319	334	329	329	325	312
12.....	315	304	306	318	334	328	328	326	312
13.....	314	306	306	317	334	328	331	326	311
14.....	314	303	311	317	334	331	330	324	311
15.....	312	301	312	317	330	331	329	324	306
16.....	312	300	314	317	331	331	330	322	307
17.....	312	300	314	316	337	338	330	321	306
18.....	311	300	315	316	334	337	328	323	306
19.....	316	300	315	319	332	336	327	322	306
20.....	317	298	315	319	333	336	333	322	307
21.....	318	298	318	319	333	338	331	322	302
22.....	319	297	320	321	330	336	329	322	296
23.....	316	300	320	321	330	336	328	318	296
24.....	316	301	320	318	326	337	328	318	296
25.....	314	298	320	319	327	337	326	317	301
26.....	312	298	320	322	328	338	328	316	301
27.....	312	302	319	321	328	338	330	316	297
28.....	313	302	319	320	325	331	331	316	296
29.....	315	302	319	321	.....	332	331	316	296
30.....	315	302	319	321	.....	336	331	319	296
31.....	315	.....	319	322	.....	339	.....	318	.....
Averages.....	315	304	312	318	330	332	332	324	307

Average daily number belonging (children present and on trial) for the year (9 months), 319.

TABLE 11.—Daily number belonging (children present and on trial) for the year ending June 30, 1888.

Day.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April.	May.	June.
1.....	298	286	287	313	305	306	301	319	325	316	316	289
2.....	297	287	287	313	305	305	300	325	325	316	315	285
3.....	297	287	288	313	305	306	299	325	325	318	319	286
4.....	296	287	288	314	305	306	301	325	325	321	324	289
5.....	294	287	290	310	306	307	306	325	323	322	323	296
6.....	294	285	291	309	305	308	308	327	320	323	323	297
7.....	293	285	293	308	305	306	307	330	319	321	319	299
8.....	293	285	293	309	304	308	307	330	322	321	317	299
9.....	290	285	299	309	306	307	306	326	326	318	316	296
10.....	290	281	299	310	311	307	309	326	325	318	313	296
11.....	291	278	299	308	312	307	306	321	325	321	314	294
12.....	291	278	303	307	319	306	308	320	320	322	314	296
13.....	293	278	304	309	319	305	310	321	321	319	314	296
14.....	294	278	305	309	316	306	310	322	322	318	311	296
15.....	293	279	306	309	317	308	310	322	323	318	313	296
16.....	295	277	306	309	317	308	309	323	323	317	311	296
17.....	295	278	306	309	317	308	309	323	323	314	311	296
18.....	295	280	306	309	317	308	309	321	321	321	311	296
19.....	295	278	306	307	317	308	310	321	324	322	311	296
20.....	293	276	304	307	317	308	311	323	323	320	311	296
21.....	292	276	305	307	318	308	313	325	323	316	309	297
22.....	292	275	307	307	317	310	313	321	324	319	311	296
23.....	291	278	306	307	311	311	313	330	327	316	310	293
24.....	291	279	312	310	309	313	314	323	326	316	306	296
25.....	289	278	313	301	309	313	313	323	326	318	297	301
26.....	289	279	312	301	310	309	319	323	321	316	297	304
27.....	288	277	310	301	310	306	320	327	321	314	297	304
28.....	287	277	311	303	308	313	313	327	313	315	296	306
29.....	287	276	309	305	306	307	313	325	313	315	293	306
30.....	287	276	308	306	306	307	317	317	317	315	292	305
31.....	287	282	.....	308	.....	306	313	.....	316	.....	289	.....
Averages.....	291	280	301	307	311	306	310	323	323	311	309	296

Average daily number belonging (children present and on trial) for the year ending June 30, 1888, 306.

TABLE 12.—Sex, color, parentage, etc., of children received since school opened.

Sex	Total
Male	1,574
Female	636
Total	2,210
White	165
Colored	11
Irish	739
English	531
German	1,163
Scotch	217
Other	1,006
Total	1,204
Other	58
Total	874
Total	1,638
Total	2,513

* For nine months only—from Oct. 1, 1886, to July 1, 1887.

TABLE 18.—Present Age of the School.

Number between 2 and 8 years of age.....						6
"	"	3	"	4	"	18
"	"	4	"	5	"	14
"	"	5	"	6	"	18
"	"	6	"	7	"	17
.....						
"	"	7	"	8	"	19
"	"	8	"	9	"	27
"	"	9	"	10	"	31
"	"	10	"	11	"	15
"	"	11	"	12	"	16
.....						
"	"	12	"	13	"	6
"	"	13	"	14	"	2
"	"	14	"	15	"	
"	"	15	"	16	"	
"	"	16	"	17	"	1
.....						
Total.....						185
.....						
Average age.....						7 4-7

TABLE 14.—*Present Standing of School.*

Number in the Kindergarten.....	46
" " Connecting Department.....	82
" reading from the chart.....	86
" " in first reader.....	49
" " in second reader.....	28
" " in third reader.....	12
" writing in copy book.....	80
" able to write letters.....	40
" studying oral numbers.....	118
" able to add practical examples.....	66
" able to subtract practical examples.....	66
" able to multiply " ".....	25
" able to divide " ".....	20
" knowing the multiplication table through the 5's.....	25
" " " " " " 12's.....	17
" studying primary arithmetic.....	40
" " oral language.....	118
" " oral geography.....	74
" " primary geography.....	12

TABLE 15.—Text Books.

Readers—Appleton's, Barnes', Butler's, Interstate, and Normal.
Arithmetic—Wentworth and Reed's.
Geographies—Mitchell's and Swinton's.
Copy Books—Payson, Dunton and Scribner's.
Number Tablets—Potter, Knight, Ainsworth & Co's.
Language Tablets— " " " "

TABLE 16.—*Showing the ages of all children when received at the School.*

Years.	1874.	1875.	1876	1877.	1878	1879.	1880.	1881.	1882.	1883.	1884	1885.	1886.	1887.*	1888.	Totals
2 to 3.....												6	16	7	12	41
3 to 4.....	2		1	1	6	5	12	7	7	10	15	12	18	13	11	120
4 to 5.....	6		10	4	18	2	8	14	9	12	24	14	15	11	18	165
5 to 6.....	14	12	18	6	14	10	17	15	13	19	38	19	32	20	21	268
6 to 7.....	11	8	15	13	9	7	17	21	22	11	26	17	25	14	22	238
7 to 8.....	23	5	18	7	16	11	21	15	23	18	33	29	33	17	18	287
8 to 9.....	24	19	18	16	27	12	27	15	26	24	46	27	37	23	19	365
9 to 10.....	15	8	25	16	25	13	20	16	15	17	32	20	36	20	26	304
10 to 11.....	12	8	15	9	14	11	23	18	11	21	41	21	21	26	24	275
11 to 12.....	17	12	20	12	15	15	16	12	20	14	23	24	37	24	23	284
12 to 13.....	19	6	12	5	12	13	6	4	4	3	12	5	2			103
13 to 14.....	12	6	6	4	4	6	1		1	1						41
14 to 15.....	5	7	2	8		1										18
15 to 16.....		1	1	1												3
Totals.....	160	92	161	97	160	106	168	137	151	150	290	194	272	*180	194	2,512
Aver'ge age.	8½	9	8½	8½	7½	8 4-5	7½	7½	7 3-5	7½	7½	7½	7 1-6	7½	7	8½

* For nine months only—from Oct. 1, 1886, to July 1, 1887.

TABLE NO. 17.—*Showing Number of Months' Detention of Children in the School.*

Mos.	No.	Mos.	No.	Mos.	No.	Mos.	No.	Mos.	No.	Mos.	No.	Mos.	No.	Mos.	No.
105	1	82	1	68	3	55	6	43	6	31	8	19	16	7	57
104	1	81	2	66	7	54	5	42	11	30	12	18	19	6	84
100	1	80	1	65	5	53	5	41	4	29	10	17	27	5	106
98	1	79	1	64	2	52	6	40	12	28	7	16	24	4	108
93	1	78	3	63	5	51	11	39	11	27	10	15	26	3	189
92	2	77	3	62	2	50	4	38	10	26	22	14	22	2	154
91	7	75	1	61	3	49	5	37	8	25	18	13	26	1	155
89	2	73	1	60	5	48	12	36	14	24	17	12	50	Less than one month. }	139
88	4	72	4	59	3	47	14	35	11	23	22	11	37		
85	1	71	3	58	3	46	7	34	12	22	23	10	38		
84	1	70	3	57	3	45	7	33	6	21	15	9	39		
83	1	69	5	56	5	44	11	32	12	20	25	8	68		
Totals	23	.....	51	.....	102	.....	195	.....	312	.....	501	.....	803	.....	1,885

Average time of detention 14 months. Average time of detention in 1884, 20 months.

SUPERINTENDENT'S REPORT.

TABLE 18.—*Showing Mortality at the School and Causes of Death.*

Causes of Death.	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887*.	1888.	Totals
Diphtheria.....	5	1									7	8				16
Pneumonia.....			8	1				1					1			11
Measles and pneumonia.....			2							1						3
Tubercular meningitis.....										1	1				1	3
Scarlet fever.....			2									1				3
Consumption.....			2	1												3
Brain fever.....							1	1								2
Lung fever.....			2													2
Measles.....			1													1
Measles and scarlet fever.....			1													1
Congestion of bowels.....					1											1
Inflammation of bowels.....													1			1
Inflammation of brain.....				1												1
Congestion of lungs.....						1										1
Congestive chill.....													1			1
Epilepsy.....		1														1
Inflammation.....		1														1
Dropsy.....													1			1
Diabetes and an injury.....					1											1
Typhoid fever.....			1													1
Chronic suppuration.....														1		1
Abscess of the cerebellum.....															1	1
Totals.....	5	3	19	3	2	1	1	2	0	2	8	4	4	* 1	2	57

* For nine months only—from Oct. 1, 1886, to July 1, 1887.

TABLE 19.—Names of the County Agents of the State Board of Corrections and Charities who have been appointed to date to find homes for the children, and to look after those indentured.

County.	Name of Agent.	Address.
Alcona.....	Chas. P. Reynolds.....	Harrisville.
Alpena.....	James J. Potter.....	Alpena.
Allegan.....	S. S. Dryden.....	Allegan.
Antrim.....	J. W. Davis.....	Elk Rapids.
Arenac.....	James J. Decker.....	Omer.
Baraga.....	Robt. R. Williams.....	L'Anse.
Barry.....	C. H. Van Arman.....	Hastings.
Bay.....	Albert Miller.....	Bay City.
Benzie.....	W. A. Betts.....	Benzonia.
Berrien.....	Thos. Mars.....	Berrien Centra.
Branch.....	J. Clark Pierce.....	Coldwater.
Calhoun.....	A. O. Hyde.....	Marshall.
Cass.....	Chas. Larzelere.....	Dowagiac.
Charlevoix.....	John S. Dixon.....	Charlevoix.
Cheboygan.....	Jacob Walton.....	Cheboygan.
Chippewa.....	Robt. N. Adams.....	Sault Ste. Marie.
Clare.....	W. A. Carpenter.....	Farwell.
Clinton.....	Wm. H. Faxon.....	Ovid.
Crawford.....	J. O. Hadley.....	Grayling.
Delta.....	John W. McNaughton.....	Escanaba.
Eaton.....	David B. Hale.....	Eaton Rapids.
Emmet.....	Hiram Parker.....	Petoskey.
Genesee.....	Geo. H. Turler.....	Flint.
Gladwin.....	Dr. R. E. Finch.....	Gladwin.
Grand Traverse.....	Henry E. Steward.....	Traverse City.
Gratiot.....	Darius Reed.....	Alma.
Hillsdale.....	Dr. John W. Falley.....	Hillsdale.
Houghton.....	Dr. Reuben H. Osborn.....	Calumet.
Huron.....	John Maywood.....	Bad Axe.
Ingham.....	Dr. J. H. Wellings.....	Lansing.
Ionia.....	John H. Van Ness.....	Ionia.
Iosco.....	Geo. L. Cornville.....	Tawas City.
Isabella.....	Cyrus E. Russell.....	Mt. Pleasant.
Ile Royal.*		
Jackson.....	Frederick A. Kennedy.....	Jackson.
Kalamazoo.....	Jerome T. Cobb.....	Schoolcraft.
Kalkaska.....	David P. Beebe.....	Kalkaska.
Kent.....	Jno. W. Holcomb.....	Grand Rapids.
Keweenaw.....	Dr. A. F. Jennings.....	Central Mine.
Lake.....	John W. Nicholson.....	Baldwin.
Lapeer.....	Francis McElroy.....	Lapeer.
Leelanaw.....	Moses C. Cate.....	Solon.
Lenawee.....	Hartwell S. Russell.....	Adrian.
Livingston.....	N. T. Kirk.....	Howell.
Mackinac.....	Andrew Foley.....	St. Ignace.
Macomb.....	Thomas Dawson.....	Memphis.
Manistee.....	Wesley B. Horton.....	Manistee.
Manitou.....	M. F. O'Donnell.....	St. James.
Marquette.....	Dr. Geo. G. Northrup.....	Marquette.
Mason.....	I. H. McCollum.....	Ludington.
Mecosta.....	Charles B. Mosher.....	Big Rapids.
Menominee.....	J. W. Bird.....	Menominee.
Midland.....	J. C. Townsend.....	Midland.
Missaukee.*		
Monroe.....	Geo. W. A. Armitage.....	Monroe.
Montcalm.....	Jos. M. Fuller.....	Greenville.
Montmorency.....	W. L. Leach.....	Atlanta.
Muskegon.....	James Snow.....	Muskegon.
Newaygo.....	Samuel W. Peterson.....	Lake.
Oakland.....	Daniel C. Jacokes.....	Pontiac.

* No agent at present.

TABLE 19.—*Continued.*

County.	Name of Agent.	Address.
Oceana.....	Caleb Davis, Jr.....	Mears.
Ogemaw.....	Allan S. Rose.....	Churchill.
Ontonagon.....	Alfred Meads.....	Ontonagon.
Osceola.....	Hezekiah Brown.....	Evart.
Oscoda.....	R. H. Foadick.....	Mio.
Otsego.....	Thomas Carney.....	Gaylord.
Ottawa.....	Henry D. Post.....	Holland City.
Presque Isle.....	Edward Erskine.....	Rogers City.
Roscommon.....	W. B. Orcutt.....	Roscommon.
Saginaw.....	John Barter.....	South Saginaw.
Sanilac.....	Dr. A. M. Oldfield.....	Lexington.
Schoolcraft.....	Wright E. Clark.....	Manistique.
Shiawassee.....	Wm. A. Fraser.....	Corunna.
St. Clair.....	Rev. Edward J. Doyle.....	Doyle.
St. Joseph.....	Franklin Wells.....	Constantine.
Tuscola.....	Rev. Chas. B. Mills.....	Mayville.
Van Buren.....	W. W. Hodge.....	South Haven.
Washtenaw.....	D. B. Greene.....	Ypsilanti.
Wayne.....	Jno. Hosmer.....	Detroit.
Wexford.....	Elmer C. Lewis.....	Cadillac.

TABLE 20. —Productions of Labor in Various Departments.

PRODUCTIONS OF FARM AND COST OF SAME, PRESENTED IN ACCORDANCE WITH SECTION 4, ACT 208, LAWS OF 1881.

Products.	1887.*	Products.	1888.
26 tons of hay..... @ \$8 00	\$208 00	11 bushels rye..... @ \$0 50	\$5 50
10 bushels peas..... 1 00	10 00	82 bunches pie plant..... 05	4 10
70 bunches onions..... 05	3 50	7 tons straw..... 5 00	35 00
138 " radishes..... 05	6 90	2,750 bbls. corn stalks..... 03	82 50
48 " asparagus..... 05	2 40	878 bushels oats..... 28	105 84
61 " pie plant..... 05	3 05	22 " corn..... 75	16 50
98 lbs. tallow..... 08	1 98	6 " string beans..... 1 00	6 00
1,858 qts. strawberries..... 06	111 48	20½ " peas..... 90	18 45
105 lbs. greens..... 05	5 25	101 " potatoes..... 80	80 80
117 " lettuce..... 05	5 85	53 " onions..... 58	29 68
1,481 " beef..... 06	88 86	18 " parsnips..... 90	16 20
5,021 " pork..... 05	251 05	720 bunches radishes..... 05	36 00
44,670 qts. milk..... 03½	1,568 45	7 bushels vegetable oysters.. 1 40	9 80
3 calves sold..... 1 00	3 00	669 " beets..... 50	334 50
127 lbs. hides..... 07	8 89	34¼ " carrots..... 20	6 85
200 blackberry roots..... 01	2 00	18 " turnips..... 30	5 40
Services of boar..... 1 00	1 00	159 " apples..... 43	68 37
" " bull..... 5 00	5 00	80 lbs. tallow..... 02	1 60
		180 " hides..... 06	11 40
		5 bushels pears..... 1 00	5 00
Total.....	\$2,281 64	111 bunches asparagus..... 05	5 55
Total amount charged to farm and barn.....	1,591 28	249 lbs. lettuce..... 08	19 92
		628 " grapes..... 02	12 56
Net value.....	\$690 36	22 bushels tomatoes..... 1 25	27 50
		14¼ " cucumbers..... 2 25	32 68
		5 bbls. cider..... 1 50	7 50
		1,140 qts. strawberries..... 10	114 00
		167 " raspberries..... 10	16 70
		268 Hubbard squashes..... 05	12 90
		183 qts. blackberries..... 10	18 30
		24 heads cauliflower..... 05	1 20
		30½ doz. summer squashes..... 07	2 12
		1 bushel crabapples.....	30
		705 melons..... 09½	66 97
		208 pumpkins..... 08	6 09
		779 heads cabbage..... 05	38 95
		845 lbs. veal..... 06½	23 42
		2,570½ " beef..... 06	154 23
		4,543 " pork..... 06	272 58
		55,915 qts. milk..... 03½	1,967 03
		316 lbs. greens..... 05	15 80
		16 bushels sweet potatoes..... 1 25	20 00
		Services of boar.....	2 00
		175 blackberry plants..... 01	1 75
		Total.....	\$3,703 49
		Total am't charged to farm and barn.....	2,502 86
		Net value.....	\$1,201 13

* For nine months only.

TABLE 20.—CONTINUED.—*Productions of Labor in various departments.*

SEWING ROOM.

Articles Made.	*1887	1888	Total.	Articles Made.	*1887	1888	Total.
Girls' dresses.....	64	186	250	Holders.....	5	30	35
" aprons.....	88	240	328	Coffee boiler cover.....	1	1	1
" waists.....	75	253	328	Carpets.....	3	2	5
" drawers.....	48	262	310	<i>Repaired.</i>			
" chemises.....		43	43	Girls' dresses.....	32	40	72
" skirts.....	16	103	124	" aprons.....	45	47	92
Night dresses.....	188	806	489	" waists.....	52	54	106
Handkerchiefs.....	730	1084	1,814	" drawers.....	45	35	80
Wraps.....	2	38	40	" chemises.....	1	9	10
Yards ruffling.....	9	18	27	" skirts.....	32	90	122
Boys' waists.....	139	51	190	" night dresses.....	7	14	21
" dresses.....	9	4	13	" cloaks.....	17	20	37
" aprons.....	12	82	94	" hoods.....	24	42	66
" skirts.....	12	5	17	" hats.....		1	1
" pants.....	16	13	29	" sun bonnets.....		3	3
" drawers.....	100	218	318	" mittens.....		8	8
" shirts.....	90	418	508	" leggings.....		4	4
Baby ".....	19	4	23	Boys' pants.....	9	16	25
Diapers.....	24	71	95	" coats.....	8	7	15
Suspenders.....	36	53	89	" shirts.....	27	12	39
Sheets.....	151	124	275	" suspenders.....	3	6	9
Pillow slips.....	223	378	601	" vests.....	15	6	21
" ticks.....		58	58	" caps.....	2	8	10
Tick cover.....	1		1	" collars.....	1	1	2
Cotton mattresses.....		8	8	Table cloths.....	4	4	8
Bed spreads.....	2	7	9	Curtains.....	3	1	4
Table cloths.....	23	21	44	Clothes bags.....		1	1
Napkins.....	93	93	186	Carpets.....	15	16	31
Bibs.....	60	254	314	Grain bags.....		6	6
Towels.....	239	476	715	Pillow slips.....	2	1	3
Kitchen aprons.....	11	51	62	Mattresses.....	1	1	2
Dining room aprons.....	13	10	23	Bed spreads.....	1	1	2
Curtains.....	9	50	59	Bed ticks.....	122	89	211
Jelly bags.....	2		2	Blankets.....		16	16
Ice bag.....	1	2	3				

TABLE 20.—*Continued.*

SHOE SHOP.

	*1887.	1888.	Total.
Pairs boots repaired.....			
Pairs shoes repaired.....	635	840	1,475

TABLE 20.—*Continued.*

BAKERY.

	*1887.	1888.	Total.
Loaves bread.....	36,124	43,096	79,220
Biscuit.....	54,530	76,250	130,780

* For nine months only.

TABLE 21.—*Dietary.*

BREAKFAST.

Sunday.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
Bread.	Bread.	Bread.	Bread.	Bread.	Bread.	Bread.
Milk.	Milk.	Milk.	Milk.	Milk.	Milk.	Milk.
Meat Gravy.	Meat Gravy.	Meat Gravy.	Meat Gravy.	Meat Gravy.	Hash.	Meat Gravy.
Oat Meal.	Hominy.	Oat Meal.	Hominy.	Oat Meal.	Oat Meal.	Rice.
Sugar.	Sugar.	Sugar.	Sugar.	Sugar.	Sugar.	Sugar.

DINNER.

Bread.	Bread.	Bread.	Bread.	Bread.	Bread.	Bread.
Mashed Potatoes.	Potatoes.	Potatoes.	Mashed Potatoes.	Potatoes.	Potatoes.	Potatoes.
Cream Gravy.	Vegetable Soup.	Pot-pie.	Meat Gravy.	Meat Gravy.	Cabbage.	Turnips.
Cold meat.	Onions.	Meat.	Pork and Beans	Meat.	Bean Soup & Crackers.	Pork and Beans.
Pickles.	Pickles.	Cabbage.		Turnips.	Onions.	Pickles.
Pie & Fruit.	Fruit.	Fruit.	Fruit.	Fruit.	Fruit.	Fruit.

SUPPER.

Bread.	Bread.	Bread.	Bread.	Bread.	Bread.	Bread.
Milk.	Milk.	Milk.	Milk.	Milk.	Milk.	Milk.
Cookies.		Cookies.		Cookies.		
	Sauce.	Biscuit and Butter. Sauce.	Mush. Sauce.	Sauce.	Biscuit and Butter. Sauce.	Mush. Sauce.

TABLE 22.—Names of Officers and Employés with salary of each.

PRESENTED IN ACCORDANCE WITH ACT NO. 206, LAWS OF 1881.

Name.	Position.	Salary.
Wealey Sears.....	Superintendent.....	\$1,500 00
Ella F. Corwin.....	Clerk.....	600 00
Nellie Sears.....	Matron.....	100 00
Sarah D. Parsons.....	".....	884 00
Lucy G. Rogers.....	Cottage Manager.....	300 00
Lida J. Nesbitt.....	".....	300 00
Fannie Russell.....	".....	300 00
Mattie B. Lyon.....	".....	300 00
Nettie Cowling.....	".....	240 00
Florence C. Mechem.....	".....	300 00
S. Lizzie Guernsey.....	".....	300 00
Susan Sawyer.....	".....	300 00
H. Amanda Hillis.....	".....	240 00
Jennie Hale.....	Hospital House-keeper.....	240 00
Ines Myers.....	Nurse.....	180 00
Sue B. Peck.....	Teacher.....	300 00
Lucella E. Staples.....	".....	300 00
Julia E. Goodman.....	".....	300 00
Sarah B. Goodman.....	".....	300 00
Janette T. Doughty.....	".....	300 00
Estelle E. Anderson.....	".....	180 00
Mate E. Ruffcom.....	Seamstress.....	180 00
Anna Rue.....	".....	144 00
Bertha Schumacher.....	Sup't Dining Room.....	168 00
Clara Lawrence.....	Domestic.....	168 00
Lizzie E. Law.....	".....	182 00
Ellen Miller.....	".....	144 00
Bessie Linehan.....	House Cleaner.....	144 00
Lizzie Woodhouse.....	Laundress.....	240 00
Nellie Gratton.....	".....	192 00
Mary Mallon.....	".....	168 00
Sarah Bryan.....	Cook.....	240 00
Maggie Sullivan.....	".....	168 00
Edwin Mansell.....	Engineer.....	300 00
George Bolles.....	Fireman.....	450 00
August Ott.....	".....	390 00
A. Greenwood.....	Baker.....	400 00
George B. Newell.....	Farmer.....	480 00
Edgar Corless.....	".....	240 00
Adelbert Bryan.....	Teamster.....	264 00
L. F. Catlin.....	Choreman.....	300 00
Ella Marx.....	Physician.....	350 00
Harriet E. Moore.....	General Supply.....	180 00

TABLE 23.—*Summary of Inventory.*

PRESENTED IN ACCORDANCE WITH THE REQUIREMENTS OF SEC. 3, ACT NO. 206, PUBLIC ACTS 1881.

Value of the State Public School Plant.—(Special Appropriations.)		
Land	\$23,000 00	
Buildings.....	137,200 00	
Brick tunnels.....	1,500 00	
Sidewalks.....	1,500 00	
Plumbing and water supply.....	8,000 00	
Steam supply apparatus.....	21,000 00	
Drainage system.....	1,000 00	
Sewerage system.....	8,700 00	
Gas supply apparatus—Generating plant.....	8,500 00	
Gas pipe and fixtures.....	2,000 00	
Cooking apparatus.....	650 00	
Mill machinery.....	500 00	
Laundry machinery.....	850 00	
Library.....	1,277 50	
Bedding.....	2,069 50	
Furniture—including school furniture.....	4,613 85	
Miscellaneous—Live stock, hay scales, etc.....	1,941 85	\$214,231 70
Material purchased out of Current Expense Funds:		
Bedding.....	739 80	
Butter, lard, and eggs.....	9 74	
Clothing.....	3,997 47	
Flour and meal.....	88 96	
Furniture.....	2,619 98	
Fuel.....	325 57	
Implements and material for farm and barn.....	1,332 59	
Groceries.....	843 80	
Hospital stores.....	850 74	
Material for lights.....	76 20	
Meat and fish.....	27 50	
Miscellaneous articles.....	1,037 41	
Tools and materials for repairs in engineer's department.....	1,417 48	
Stationery, blanks, and office supplies.....	1,081 96	
School supplies.....	518 25	
Vegetables and fruits.....	107 43	
Live stock.....	2,725 00	16,699 83
Totals.....	\$230,931 58	\$230,931 58

TABLE 24.—*Gas Record, showing amount and cost of gas for the year ending June 30, 1887.**

Month.	Cubic feet of gas made.	Gallons of oil used.	Pounds of coal used.	Value of material.	Average daily cost.	Candle power.
1886—October.....	28,946	287	4,250	\$21 04	90 68	26
November.....	28,826	292	4,561	21 45	71 1-2	25
December.....	24,826	266	3,452	18 72	60 2-5	26
1887—January.....	26,620	288	3,950	20 70	66 4-5	27
February.....	27,210	279	4,246	20 61	73 4-7	27
March.....	27,118	284	4,612	21 44	69 1-6	27
April.....	18,231	183	2,678	13 35	44 1-2	26
May.....	12,449	136	1,838	9 68	31 1-5	27
June.....	6,788	106	1,288	7 32	24 2-5	24
Totals and averages..	200,964	2,121	30,875	\$154 31	56 1-2	26

* For nine months only.

TABLE 25.—*Gas Record, showing amount and cost of gas for the year ending June 30, 1888.*

Month.	Cubic feet of gas made.	Gallons of oil used.	Pounds of coal used.	Value of material.	Average daily cost.	Candle power.
1887—July.....	9,263	76	1,173	\$5 64	18 1-5	24
August.....	18,961	150	2,324	11 11	35 5-6	23
September.....	17,888	154	2,219	11 42	38	24
October.....	23,223	200	3,065	14 91	48 1-10	23
November.....	23,664	229	2,890	16 07	53 3-5	21
December.....	30,462	307	3,878	21 55	69 1-2	22
1888—January.....	29,205	315	3,932	22 25	71 4-5	24
February.....	24,467	251	3,232	18 18	62 5-7	23
March.....	22,979	243	2,902	17 22	55 3-5	22
April.....	13,640	146	1,759	10 38	34 3-5	23
May.....	8,980	96	1,198	6 80	22 1-4	22
June.....	9,017	110	1,070	7 18	24	22
Totals and averages..	231,754	2,277	29,647	\$162 81	44 1-2	22

TABLE 26.—*Showing Consumption and Cost of Coal Gas during Eight Years—1874 to 1882.*

Year.	Cubic feet consumed.	Annual cost.	Daily cost.	Remarks.
May, 1874, to October, 1875.....	334,200	\$1,002 84	\$1 70	Covers 589 days.
1875-'76.....	246,500	739 40	2 02	.....
1876-'77.....	342,100	1,026 31	2 81	.....
1877-'78.....	387,500	1,162 50	3 18	.....
1878-'79.....	316,000	948 00	2 60	.....
1879-'80.....	329,600	968 80	2 70	.....
1880-'81.....	315,800	945 80	2 60	.....
1881-'82.....	302,500	907 60	2 49	.....
Totals.....	2,573,700	\$7,721 35	\$20 10	.....
Averages.....	321,713	\$965 17	\$2 51	.....

NOTE :
Total cost of coal gas for the last six years it was used—1876-'82..... \$5,979 11
Average annual cost of coal gas for the last six years it was used—1876-'82..... 996 52

TABLE 27.—*Showing Consumption and Cost of Petroleum Gas for the past Six Years—1882-1888.*

Year.	Cubic feet consumed.	Annual cost.	Daily cost.	Remarks.
1882-'83.....	257,963	\$190 80	\$0 52	
1883-'84.....	310,699	247 62	67½	
1884-'85.....	263,556	245 54	67½	
1885-'86.....	265,618	194 47	53½	
1886-'87.....	200,964	154 31	56½	For nine months only.
1887-'88.....	231,754	162 81	44½	
Totals.....	1,540,554	\$1,195 05	\$3 41½	
Averages.....	255,092	\$199 18	\$0 57	

NOTE:

First cost gas works' plant.....	\$3,500 00
Cost of material for making gas for past six years.....	1,195 05
Cost of repairs to gas works for past six years.....	251 69
Total cost of gas, gas works' plant, and repairs on same.....	\$4,946 74
Average annual cost for gas, including cost of plant.....	\$824 46

Comparisons.

Total cost of coal gas for six years—1876-'82.....	\$5,979 11
Total cost of petroleum gas, including cost of plant—1882-'88.....	4,946 74
Difference in favor of petroleum gas, with plant in good repair.....	\$1,032 37
Average annual cost of coal gas for six years—1876-'82.....	\$996 52
Average annual cost of petroleum gas for six years—1882-'88.....	824 46
Difference in favor of petroleum gas—with plant in good repair.....	\$172 06

TABLE 28.—*Fuel, Steam, and Temperature Record for year (9 months) ending June 30, 1887.*

Month.	Coal Consumed.		Cords of wood consumed.	Value of fuel used.	Average daily cost of fuel.	Hours engine was in use.	Hours steam used for heating purposes.	Average outside temperature for month.
	Tons.	Pounds.						
1886 October	85	1,541	.....	\$270 07	\$8 71	247	310	53.5°
November	184	440	.....	422 89	14 09	248	537	36.6°
December	163	708	11½	538 75	17 38	255	574	21.2°
1887 January	153	78	69 7-16	632 85	20 41	247	579	20.7°
February	125	1,535	43 5-16	515 76	18 42	218	473	27.1°
March	140	1,254	17½	486 59	15 70	232	401	28.5°
April	103	1,140	.....	326 00	10 87	233	337	44.3°
May	44	1,950	.....	141 52	4 57	237	53	65.5°
June	42	434	.....	133 07	4 44	253	14	71.3°
Totals	992	1,080	141½	\$3,467 50	\$114 59	2,170	3,278	368.7°
Averages	110	584	15½	\$385 23	\$12 78	241	364	41.0°

TABLE 29.—*Fuel, Steam, and Temperature Record for year ending June 30, 1888.*

Month.	Coal Consumed.		Cords of wood consumed.	Value of fuel used.	Average daily cost of fuel.	Hours engine was in use.	Hours steam used for heating purposes.	Average outside temperature for month.
	Tons.	Pounds.						
1887 July	37	514	.....	\$117 08	\$3 78	244	.....	79.1°
August	43	1,452	.....	137 84	4 45	252	53	69.5°
September	57	660	.....	181 84	6 06	225	136	60.5°
October	99	1,152	.....	318 64	10 23	254	352	46.9°
November	115	628	15 15-16	405 66	13 52	246	505	37.3°
December	132	534	55 9-16	544 27	17 56	255	583	27.6°
1888 January	145	1,968	63 3-4	643 29	20 75	245	690	17.7°
February	121	1,964	39 7-16	516 61	17 81	224	558	23.9°
March	121	423	49 1-8	535 13	17 26	234	495	23.8°
April	86	876	25 13-16	360 32	12 01	218	442	45.5°
May	75	64	1 1-4	263 23	8 49	233	291	52.7°
June	37	966	1-3	133 06	4 40	229	50	67.9°
Totals	1,073	1,246	251 3-8	\$4,156 03	\$136 37	2,354	4,155	557.4°
Averages	89	937	22	\$346 33	\$11 36	238	346	46.5°

HEALTH.

For more extended information regarding the health of the children during the past year, I refer you to the report of Dr. Marx, who has been our resident physician for that period.

Table 18 states concisely the number and causes of all deaths that have occurred in this institution since its establishment.

The remarkably low percentage of mortality for the greater portion of the history of this school deserves special notice.

During the past biennial period only three deaths have occurred at the school—none of them having been caused by contagion.

The number of children treated by the physician at the hospital always seems large, but when it is borne in mind that the children received here come from all conditions in life, that with them home comforts have been few or entirely wanting, that many of them are mere babes needing special care, the necessity for somewhat frequent hospital treatment appears.

Several causes have contributed to produce the present satisfactory condition of the children's health.

1st. Dietary.—The material of which our food is prepared is purchased with no other object in view than to supply the tables with a good wholesome diet, of sufficient variety to possess all the food elements.

By reference to the dietary, Table 21, it will be observed that the bill of fare does not differ materially from those presented in previous reports. The changes that have been made are intended to furnish a more palatable diet while, at the same time, its nutritiousness has not been impaired.

The farm produces an abundance of all kinds of vegetables, and no greater dietary blessing can come to the children than the fresh pure milk from our herd of Holstein cattle, there usually being an abundance of milk for every child.

2d. Resident Physician.—Another cause which has aided very considerably to preserve the health of our children is the fact of having a resident physician.

With a physician whose services are immediately available, prompt and effective measures may be adopted in the very first stages of a disease.

In the event of awaiting the pleasure of a physician called from a distance, serious consequences might result.

Then, too, there is the constant oversight that a resident physician can give in serious illness which is impossible in the case of employing a non-resident.

3d. Sanitary.—All sewage is carried directly away from all buildings to the sand trap below the laundry, and from thence conveyed by the main sewer to Mud Creek, more than a mile from the Institution, before it comes to the surface of the ground.

No rubbish or filth of any kind is permitted to accumulate or remain near the school.

Dormitories, school-rooms, and play-rooms are thoroughly ventilated.

Every child must take a full body bath at least once per week.

A plentiful supply of nourishing food is furnished, an abundance of clean clothing is always ready for use, employes are unremitting in their care of the children.

With all these conditions constantly present, it would seem that the children of this school should be preserved in good health if they are strong when they are received.

SCHOOLS.

Six teachers have been regularly employed during the past year.

All the work done in the schools is primary in its nature, but careful instruction is given in all departments and the foundation for a good English education is well laid.

A few years since a kindergarten was established and last November, upon the completion of the addition to the school-house, a connecting department was organized. In the latter, advanced kindergarten work is pursued and the most elementary instruction in reading, writing, numbers, language, etc., is given.

The introduction of kindergarten methods into our curriculum of school work has proved an exceedingly wise measure.

No other system is so admirably adapted to give such occupation and instruction to the younger children as they need, training them in habits of observation, industry, politeness, and morality.

The instruction given in the other departments corresponds to the work of the 1st, 2d, and 3d years of graded schools.

All departments are well equipped with such apparatus and appliances as will aid in the work of instruction.

Many discouragements attend our teachers' efforts, owing to the fact that our children are changing so frequently.

The pupils that leave our schools, however, are well able to enter classes of a corresponding grade in other schools.

GRADATION OF SCHOOLS.

Kindergarten.

Gifts—1st to 10th inclusive.

Occupations—Stringing beads, parquetry, interlacing, sewing, etc.

Observations—Study of form and surroundings, color, number, symmetry, neatness, etc.; manual dexterity; creative ingenuity; songs, calisthenics and games.

Room 1.—Connecting Department.

Gifts—1st to 10th reviewed.

Occupations—Same as in kindergarten but extended. Folding, weaving, pasting, sewing, drawing, and clay moulding.

Reading—Appleton's chart.

Spelling, writing, and simple numbers.

Singing, marching, and calisthenics.

Room 2.—First Primary.

Reading—Chart and first reader.

Spelling—All words learned.

Writing—Copy-book A.

Numbers—Combinations to 15. Easy problems in four fundamental operations.

Language and geography—oral.

Singing, gymnastics, morals, and manners.

Room 3.—Second Primary.

Reading—First and second readers.

Spelling—All words used—oral and written methods.

Writing—Copy-book B.

Numbers—Writing to 10,000. Easy problems.

Language—Sentence making, language tablet No. 1.

Geography—oral—School-room, town, county, and State.

Singing, physical exercises, morals and manners.

Room 4—Third Primary.

Reading—Second and third readers.

Spelling—From all studies—oral and written.

Writing—Copy-book No. 2.

Numbers—Advanced work in fundamental operations. Primary arithmetic.

Language—Sentence making, letter writing, compositions, language tablets Nos. 2 and 3.

Geography—oral. Butler's primary geography.

Singing, oral instruction, calisthenics, morals and manners.

FARM.

This school owns 120 acres of land. Deducting 15 acres of marsh, $1\frac{1}{2}$ miles west of the school, and about 30 acres for grounds around buildings, there remain about 75 acres for tillable purposes.

Usually 25 or 30 acres of this are reserved for pasturage and hay, about 10 acres for garden and small fruits, and the remainder is cultivated for corn, oats, potatoes, etc.

It is our aim to till this land so carefully that abundant crops may be obtained.

The past biennial period has not been favorable for producing large crops; nevertheless the labor and expense placed upon the farm have been fairly remunerative.

Table No. 20 presents in detail the amount and value of farm productions for the past two years. The period covered by the year (9 months) ending June 30, 1887, is that portion in which comparatively few products are secured.

But during that period the net value of farm productions was \$690.36.

You are aware that the past year was a very trying one to Michigan farmers.

The excessively hot weather and prolonged drought of July and August, 1887, almost completely ruined the small fruit, garden, corn, and potato crops of this region.

Notwithstanding these conditions, the value of farm productions, at a reasonable estimate, was \$3,703.49 and the net value of such productions was \$1,201.13.

The improvements made upon the marsh at the outlet of the sewer should

receive notice. During the past years the willows, swamp rose-bushes, and other und rbrush have been cut off and burned. The accumulations of rubbish at various points have been picked up and, so far as possible, burned. Heretofore, only about one-half of this tract was productive. Now there are from twelve to fifteen acres of good mowing land which promises to produce eighteen to twenty tons of good marsh hay. Further work upon this land, with some judicious seeding and careful attention, will result in making it a productive and valuable meadow.

The stock is in good condition and repays us well for the care and expense bestowed upon it. We milk from twenty to twenty-five cows and, in the event of short pasturage, endeavor to have a plentiful supply of green corn for fodder.

The machinery at the barn used in the preparation of food is all in good working condition and is of much value to us in economic feeding. So much attention is given to obtain the best results in feeding that nothing is wasted and at all seasons of the year our stock looks well.

A vegetable cellar for the proper protection and preservation of roots, apples, etc., should be built as soon as convenient. At present we are not supplied with sufficient cellar storage room.

The additions to barns and sheds furnish ample accommodations for the care of stock, farm machinery, etc., leaving nothing further in those lines to be desired at present.

FUEL, STEAM, LIGHTS, ETC.

For complete statistical information concerning the engineer's department I refer you to tables No. 24 to 29, wherein will be found much of interest.

The daily cost of fuel for steam generation for the past five years has been as follows:

For 1884—daily cost of fuel.....	\$13 77
“ 1885— “ “ “ “	12 97
“ 1886— “ “ “ “	11 49
“ 1887— “ “ “ “	(for nine months) 12 70
“ 1888— “ “ “ “	11 08

The reduction in cost of fuel for the past several years is attributable to the reduction in price of coal, but the larger part to experienced and careful firing and the protection of steam pipes by covering them with mineral wool pipe covering.

The question whether with present boiler capacity we are able to obtain really economic results in heating deserves your careful consideration.

Our engineer estimates that with increased boiler capacity an additional saving of at least ten per cent. can be made in the annual cost of fuel for steam generation.

LIGHTS.

The only excuse I have to offer for again referring to the subject of gas manufacture is to call attention to the remarkably low cost of lights for this institution during the past year.

The average daily cost of gas for the entire school has been only 44½c.

With an average population, pupils and employés, of about 250, this low cost seems an impossibility.

I believe we can safely challenge the production of a better record outside the fields of natural gas.

The entire engineer's department is in excellent working condition.

HOLIDAYS.

Our boys and girls always look forward with pleasurable anticipation to holidays, which are generally observed.

At Thanksgiving time a bountiful dinner is provided.

Christmas is a day of festivity and happiness.

For the past two years, at Christmas season, our children have been generously remembered by Ex-Gov. R. A. Alger and Mrs. James Burns, who have contributed freely to the pleasure of the boys and girls.

Their gifts, together with the interest on the Kittie Bagley fund, enabled us to provide liberally for the occasion.

Patriotic sentiments are noisily expressed on the Fourth of July, and no other day furnishes more pleasure.

Holidays are not only observed, but the children are instructed as to their significance and useful lessons are instilled.

ACKNOWLEDGMENTS.

We desire to thank Ex-Gov. R. A. Alger for his annual gift of one hundred dollars for the purchase of Christmas presents.

We are under obligations to Mrs. Jas. Burns for the usual supply of Christmas candy for the children and also for the gift to the Institution of a life-sized crayon portrait of her late husband, formerly a member of the Board of Control.

We return thanks to Mr. Albert W. Landon, editor of the "Humane Journal," for a large supply of children's papers; to the railroads of the State whose employes have so carefully and patiently assisted us in the transportation of hundreds of children over their lines; to the officers of Branch County Agricultural Society for the courtesy of free admission to their annual exhibition; to the clergy of the city for generous assistance in Sunday school work; to the editors of the following papers whose publications have come to us gratuitously: Coldwater Courier, Coldwater Republican, Coldwater Sun, State Republican, Deaf Mute Mirror, Grange Visitor, Church Helper, Progressive Age, Child and State, and Our Dumb Animals.

CONCLUSION.

It would be doing violence to my sense of justice did I not express my appreciation for the very cordial manner I have been seconded in my labors by the employes of this Institution.

During the short time I have been among them our workers generally have shown themselves loyal to the School and to its management.

I believe you are to be congratulated upon the harmonious and friendly spirit that has prevailed among our employes, and I desire to express my grateful obligations to all who have assisted in promoting this work.

To you, gentlemen of the Board of Control, I wish to extend my thanks for your words of advice and coöperation in my efforts to superintend the detailed work of this School.

Assuring you that I assumed this position that I might be of service in the work of child-saving,

I have the honor to subscribe myself,

Your obedient servant,

WESLEY SEARS,

Superintendent.

REPORT OF THE STATE AGENT.

Mr. Wesley Sears, Superintendent of the State Public School:

SIR,—I herewith present to you, and through you to the Honorable Board of Control, a report of the work of the State agency from September 30, 1886, to June 30, 1888.

During but nine months of this period has there been a regularly appointed State agent. In 1886 and 1887 the clerk did a small amount of visiting—see Table C. The remainder of the State agent's visits have been made by myself—see Table D.

The work of indenturing and securing reports from children has been carried on with vigor for the past twenty-one months, as the following tables will show.

Summary A. shows the number of reports received from September 30, 1886, to January 1, 1888. During this time the average number from whom reports were to be obtained was 945. On January 1, 1888, there were but 49 from whom we had received no report for one year.

Summary B. shows the record of reports from January 1, 1888, to June 30, the date of this report. Of the average number, 1003, from whom reports were to be obtained for this period, we have known the whereabouts of all but six within the past year.

SUMMARY A.

By whom reported.	Number reported.
By Guardians.....	754
By State Agent.....	371
By County Agents.....	341

SUMMARY B.

By whom reported.	Number reported.
By Guardians.....	846
By State Agent.....	310
By County Agents.....	40

TABLE A.—Showing the number of Children indentured each month since the Institution opened.

Month.	1874.	1874-5.	1875-6.	1876-7.	1877-8.	1878-9.	1879-80.	1880-1.	1881-2.	1882-3.	1883-4.	1884-5.	1885-6.	*	1886-7.	1887-8.
October		2	5	8	8	10	11	9	2	6	6	25	16	July.....		17
November		5	9	2	1	7	10	12	2	15	2	24	12	August.....		21
December		2	8	3	2	3	7	3	10	10	40	6	3	September.....		7
January.....		5	4	4	2	7	8	3	9	5	17	14	18	October.....	17	10
February		7	5	7	4	2	9	13	5	2	14	11	18	November.....	17	13
March		9	4	10	10	9	13	12	14	8	16	18	12	December.....	6	18
April.....		9	5	15	21	13	21	7	18	7	15	28	16	January.....	18	22
May.....		11	9	10	6	20	9	14	17	31	33	28	29	February.....	15	7
June.....		9	7	4	18	14	15	10	7	12	17	18	23	March.....	16	19
July.....		4	4	10	7	8	15	6	3	5	24	18	20	April.....	20	19
August.....	1	4	5	6	10	9	11	11	12	2	18	16	11	May.....	22	21
September	1	2	4	8	6	11	11	22	12	22	14	19	19	June.....	16	10
Totals	2	69	69	87	93	113	140	122	111	125	216	220	186	.....	147	184

* On account of the change in the fiscal year.

TABLE B.—Showing the Permanency of the Homes by giving the Number Indentured but once, etc.

Times Indentured.	Report of 1883-'84.	Report of 1885-'86.	Report of 1887-'88.
Number indentured but once.....	780	1,055	1,244
Number indentured but twice.....	247	343	424
Number indentured three times.....	80	103	146
Number indentured four times.....	26	34	46
Number indentured five times.....	8	9	17
Number indentured six times.....	5	6	7
Number indentured seven times.....	1	1	1
Whole number indentured.....	1,147	1,551	1,885

TABLE C.—Record of the Clerk's visiting from September 30, 1886, to June 30, 1887.

County.	No. Children Visited.	No. New Homes Investigated.	No. Children Doing Well.	No. Children Doing Fairly Well.	No. Children Doing Poorly.	No. Children Transferred.	No. Children Returned to School.	No. Children in Poor Homes.	No. Days' Work Done.	Total Expense.	Per Capita Expense.
Branch	66	.....	57	6	3	.....	.....	.....	10	\$24 70	\$0 37
Berrien	10	.....	7	2	1	.....	.....	.....	3	14 45	1 44
Cass	9	.....	8	1	.....	.....	.....	.....	2	7 25	81
Calhoun	4	.....	3	.....	1	.....	.....	.....	2	7 81	1 95
Hillsdale	16	.....	17	1	.....	.....	.....	.....	3	9 75	54
Jackson	7	.....	5	.....	2	.....	.....	.....	3	12 85	1 83
Lenawee	20	.....	15	2	3	.....	.....	.....	4	12 50	60
Monroe	17	.....	15	1	1	.....	.....	.....	3	10 60	63
St. Joseph	22	.....	25	2	5	.....	.....	1	10	30 94	97
Van Buren	3	.....	2	.....	1	.....	.....	.....	2	7 35	2 45
Wayne	7	.....	5	.....	2	.....	1	.....	2½	7 85	1 12
Summary	193	.....	159	15	19	.....	1	1	44½	\$146 05	\$0 73

TABLE D.—Record of Visiting by the State Agent from June 30, 1887, to June 30, 1888.

County.	No. Children Visited.	No. New Homes Investigated.	No. Children Doing Well.	No. Children Doing Fairly Well.	No. Children Doing Poorly.	No. of Children Transferred.	No. Children Returned to School.	No. Children in Poor Homes.	No. Days' Work Done.	Total Cost.	Per Capita Cost.
Allegan.....	6	—	4	1	—	—	1	—	2½	\$28 62	\$3 94
Barry.....	13	1	7	1	4	—	—	—	3	25 33	1 80
Bay.....	4	—	4	—	—	—	—	—	2	12 28	3 07
Benzie.....	10	—	9	1	—	—	—	—	2½	22 83	2 28
Branch.....	52	4	38	8	6	—	2	5	11½	62 83	1 12
Calhoun.....	10	2	5	4	1	1	—	—	4½	30 21	2 52
Cheboygan.....	1	—	1	—	—	—	—	—	1	5 56	5 56
Clare.....	1	—	1	—	—	—	—	—	½	1 76	1 76
Clinton.....	15	3	14	—	1	—	—	—	1	13 44	75
Genesee.....	8	—	5	3	—	—	—	2	2½	18 62	2 33
Grand Traverse.....	24	3	15	6	2	—	—	—	7½	50 32	1 86
Gratiot.....	3	—	2	—	1	—	—	—	½	9 17	3 06
Hillsdale.....	39	2	31	2	4	—	—	2	7½	58 19	1 42
Huron.....	2	3	1	1	—	—	—	—	2½	16 14	3 23
Ionia.....	11	1	10	1	—	—	—	1	2	20 03	1 67
Jackson.....	6	1	6	—	—	—	—	—	1½	10 57	1 51
Kent.....	28	6	16	7	5	—	—	—	9½	73 34	2 16
Lake.....	2	—	2	—	—	—	—	—	1	4 68	2 34
Lapeer.....	9	1	8	1	—	—	—	—	5	33 34	3 33
Leelanaw.....	11	—	6	1	4	1	—	1	2½	22 53	2 05
Lenawee.....	21	—	12	5	4	—	—	—	5½	34 11	1 62
Macomb.....	7	1	5	1	1	—	—	—	2½	17 53	2 19
Manistee.....	22	2	16	3	3	2	—	—	5½	46 75	1 95
Mason.....	33	5	16	11	6	—	—	—	8	73 09	1 92
Mecosta.....	1	—	1	—	—	—	—	—	½	2 01	2 01
Monroe.....	18	1	13	3	2	—	—	—	2½	23 12	1 23
Muskegon.....	13	3	11	2	—	—	—	—	3	28 98	2 23
Montcalm.....	1	—	1	—	—	—	—	—	1	4 89	4 89
Newaygo.....	7	1	4	2	1	—	—	1	2½	18 64	2 66
Oceana.....	10	1	7	2	1	—	—	1	1½	18 14	1 81
Osceola.....	6	1	5	1	—	—	—	—	1½	18 34	1 90
Oscoda.....	4	—	3	—	1	—	—	—	1	7 52	1 88
Otsego.....	4	—	3	—	1	—	—	—	1	7 52	1 88
Ottawa.....	3	1	2	1	—	—	—	—	2	13 70	3 48
Oakland.....	8	—	6	2	—	—	—	—	2½	18 42	2 30
Saginaw.....	3	—	2	—	—	—	—	—	2	10 21	5 10
Sanilac.....	4	—	3	1	—	—	—	—	2½	13 42	3 35
St. Clair.....	21	2	14	7	—	—	—	4	5½	41 75	1 35
St. Joseph.....	23	—	17	2	—	—	1	—	4½	34 52	1 50
Tuscola.....	3	1	3	—	—	—	—	—	2½	16 40	4 10
Van Buren.....	3	—	1	1	1	—	—	—	1½	10 12	3 37
Wayne.....	8	2	5	—	3	—	2	2	3	21 87	2 43
Washtenaw.....	7	1	4	2	1	—	—	—	1½	17 35	2 17
Wexford.....	1	—	1	—	—	—	—	—	1½	6 39	6 39
Ohio.....	1	—	1	—	—	—	—	—	½	5 53	5 53
Indiana.....	—	1	—	—	—	—	—	—	2½	11 42	11 42
Totals.....	487	50	341	83	53	4	6	19	135½	\$1,020 44	\$1 90
Percentages.....	—	—	72	17	11	—	—	—	—	—	—

TABLE E.—Giving a record of the attendance of the indentured children in the public schools during the past year, compiled from the guardians' reports of January, 1888.

Months' Attendance in Public Schools.	No. of Children Attending.	Taught at Home.	Too Young.	Past Eighteen.	In Homes During Summer Only.	Attendance Not Reported.	Children Not Reported.
10	28						
9	50						
8	49						
7	38						
6	78						
5	98						
4	190						
3	91						
2	54						
1	20						
		33	82	11	61	36	6

Total number reported, 873.

TABLE F.—Showing the age at time of indenture of all indentured children.

	To Sept. 30, 1884.	Sept. 30, 1884, to Sept. 30, 1886.	Sept. 30, 1886, to July 1, 1887.	*July 1, 1886, to July 1, 1887.	July 1, 1887, to July 1, 1888.
From 2 to 3 years of age.....		7	6	8	3
" 3 to 4 " ".....	24	14	13	8	6
" 4 to 5 " ".....	27	16	12	5	7
" 5 to 6 " ".....	55	21	22	15	9
" 6 to 7 " ".....	48	25	25	16	16
" 7 to 8 " ".....	77	43	27	15	15
" 8 to 9 " ".....	100	50	43	23	23
" 9 to 10 " ".....	135	65	53	28	35
" 10 to 11 " ".....	168	74	66	37	36
" 11 to 12 " ".....	162	56	50	33	21
" 12 to 13 " ".....	180	26	16	9	8
" 13 to 14 " ".....	106	5	1	1	1
" 14 to 15 " ".....	50	1	0	0	0
" 15 to 16 " ".....	12	1	0	0	0
" 16 to 17 " ".....	8	0	0	0	0
Totals.....	1,147	404	334	198	186

* This column was made for the sake of comparing full years.

In my estimate of the condition of the children visited by me, I have counted as doing well, all those who were in proper homes, who were improving morally, mentally, and physically; who were contented, happy, and giving general satisfaction. Those who were in good homes and were honestly trying to overcome their faults, but were not improving much in any line, I have considered as doing fairly well. All others I have counted among those doing poorly.

A glance at the table will show that a very large percentage of the children seen was doing well. Their guardians are kindly strict in their discipline, lenient with their mistakes due to ignorance, and altogether suitable to have the responsibility of making good men and good women of the boys and girls they have taken in charge.

While we have now nearly a thousand homes throughout the State, there certainly must be a much greater number of homes that will open and receive children. During the past two years, could we have filled all the applications, over eight hundred children would have been placed in homes, instead of but few more than half of that number.

The county agents of the State Board of Corrections and Charities are, as a rule, ably seconding our efforts to care for the children. They are interested in the welfare of the boys and girls and watch over them in their new home relations with a parental care. A careful discrimination in the homes they are called upon to become responsible for is being exercised by them, and we can, in the main, depend upon their judgment. By reason of this painstaking a high class of homes is being secured, and the children are being given better training. Still there is too much of an idea that any sort of a home, where there is an abundance of bread and butter, is good enough. When the home life, rather than the financial condition is looked to, then we will secure the ideal homes and treatment of the children.

In my travels I have taken occasion to call at the county houses as often as I could do so conveniently. In some I found children, eligible to the School, being retained in the county house, in the hope that suitable homes could be found without sending the children to the School. A pernicious practice I believe, is this placing children direct from the county houses. In most counties, however, I found the Superintendents of the Poor and Poor-masters more anxious to place the care of the children in the hands of the State than they were to assume the responsibility of placing them themselves.

My reception by the county agents has been cordial and their advice has been of much benefit to me in my work. I desire here to thank them for all they have done for me.

I would also thank you, Mr. Sears, for your wise and timely counsel, and you, gentlemen of the Board, for your generous assistance and support.

Respectfully submitted,

WM. B. STREETER,

State Agent.

PHYSICIAN'S REPORT.

To the Board of Control:

GENTLEMEN,—As far as I can determine by investigating the records, the health of the children of this institution has been better in the past two years than for six years past, though almost as many cases have been treated at the hospital. They have been of a much milder type, and there have been fewer fatal cases, notwithstanding the fact that the average age of the children has grown younger. Since the date of the last report there have been no cases of diphtheria which heretofore has proved such a scourge, and only one case of scarlatina and that of a mild type. There has been an endemic of varicella and one of mumps, both of which were allowed to take their course, as the cases were uniformly of a light character. Of the former there were 15, and the latter 114. In two cases, one a scrofulous half-breed Indian, the other a mulattress, suppuration of the cervical lymphatic glands followed the attack of mumps; otherwise there were no serious results.

October 22, 1886, George Fisher died from exhaustion, due to necrosis of the femur. August 28, 1887, Minnie Robinson, a colored child, died of tubercular meningitis, and October 18, 1887, Amelia Sipchen died of tumor and abscess of the cerebellum.

The diseases most prevalent in the past two years have been those of the respiratory passages, tonsilitis, croup, bronchitis, and pneumonia, and those due to a scrofulous diathesis, enlarged glands, diseases of the eye and ear. Three cases of tinea tonsurans broke out in January of this year, but care and treatment have prevented the spread of the disease. The surgical cases of importance have been two fractures of the femur, one of both bones of the forearm, and one of the clavicle, a dislocation of the elbow joint, and necrosis of the tibia, all of these resulting favorably under treatment, excepting the last, which after two operations at the University of Michigan is, we hope, now on the way to recovery.

At the present time there are in the hospital three cases of measles. Whether the disease will be restricted to these remains to be seen, though it is hardly to be expected; at any rate the authorities of the institution merit great praise and congratulations in that the school has managed to escape so long an epidemic which has swept almost all Michigan and especially this section.

In conclusion I would say that I consider the improved health record to be due, aside from the fact that there has been no epidemic of diphtheria, to the advantages afforded by the present system of having a resident physician, as in this way serious cases can be taken at their very inception, and the minor cases are more apt to receive prompt attention and not allowed to grow serious, if they are at all preventable.

Very respectfully,

July 1, 1888.

ELLA MARX, M. D.

APPENDIX.

L A W S

RELATING TO THE ESTABLISHMENT AND GOVERNMENT OF THE STATE PUBLIC SCHOOL, AND OTHER LAWS RELATING TO CHILDREN.

The first eight sections are omitted as they relate only to the location and establishment of the school.

SEC. 9 The general supervision and government of said State Public School shall be vested in a Board of Control, to consist of three members, who shall be appointed by the Governor, by and with the advice and consent of the Senate, the members of which Board shall hold their offices for the respective terms of two, four and six years, from the last day of the session of the Legislature next after the completion of said State Public School building, and until their successors shall be appointed and qualified, said respective terms of office to be designated in their several appointments; and thereafter there shall be one of said board appointed every two years, whose term of office shall continue for six years, or until his successor is appointed and qualified. The members of said board shall constitute a body corporate, under the name and style of the "Board of Control of the State Public School," with the right of suing and being sued, of making and using a common seal, and altering it at pleasure. That said Board of Control shall have the power of taking and holding by purchase, gift, donation, devise or bequest, real or personal estate to be applied to the use of the institution.

SEC. 10. It shall be the duty of said Board to meet once each three months, and oftener if necessary. It shall elect from its own number a President and Secretary. It shall also elect a Treasurer, who may or may not be a member of said Board. The said Treasurer shall give his bond to the people of this State, with two or more sufficient sureties, to be approved by said Board and by the Governor, in the penal sum of at least ten thousand dollars, or in such larger amount as said Board may require, conditioned for the faithful performance of the duties required of him by law and to account for and pay over as required by law all moneys received by him as such Treasurer. The said Board shall establish a system of government for said School, including all necessary regulations for the good order thereof and for the maintenance, health, instruction and moral training of the children in said school; for placing them in family homes, and for their supervision there while they remain the wards of said Board. The said Board shall appoint a Superintendent, Matron, Cottage Managers, Teachers and such other officers and employes as shall be necessary, who shall severally hold their offices during the pleasure of said Board; and said Board shall prescribe their duties and fix their salaries, subject to the approval of the Governor.

SEC. 11. Whenever the Superintendents of the Poor of any county shall find in their county any child over two and under twelve years of age, who in their opinion is dependent on the public for support, and is sound in mind and body, they shall file a petition in the Probate Court of their county, signed by at least two of their number, wherein they shall state that in their opinion the child named is dependent on the public for support, is between two and twelve years of age, is sound in mind and body, and has no parents against whom its support can be enforced as provided by law. They shall also therein give the names, residence and occupation of the parents or either, so far as they are able, whether either is dead or has abandoned the child; requesting therein an examination and determination by said Court as to such alleged dependence, and should the child be found by said Court to be dependent on the public for support that an order be entered sending it to the State Public School. That upon the filing of such petition, if it shall appear therein that one or both of said parents reside in said county, the Judge of said Court shall issue a citation fixing the time and place for the hearing of such petition, which shall be served on one or both of said parents if either can be found in said county, not less than two days before the time fixed for said hearing, requiring them to appear on said day and hour, and show cause, if any, why said child should not be declared by said court to be dependent on the public for support and sent to the State Public School. That in case it shall appear by such petition that neither of said parents are living or do not reside in said county, or in case one or both of said parents shall endorse on said petition a request that the child be sent to said School as requested therein, then the citation herein provided for need not be issued and the Court may thereupon proceed to the examination herein provided for. It shall be the duty of the officer receiving such citation to use due diligence to find and serve the same on one or both of said parents: yet the proceedings under such petition shall not be deemed invalid by reason of any failure to serve such citation or by any informality or irregularity in such petition or service.

SEC. 12. That on such examination the child shall be brought before said Court by said Superintendents of the Poor; whereupon it shall be the duty of said Judge to investigate the facts and ascertain whether said child is dependent on the public for support, its residence, and, as far as possible, the whereabouts of the parents, when and how long the child has been maintained in whole or in part by public or private charity, the occupation of the parents, if living, whether they are supported by the public or have abandoned the child, and to ascertain as far as possible, if the child is found dependent, the causes thereof. The said Judge is authorized to compel the attendance of witnesses on such examination, and it shall be the duty of the Prosecuting Attorney of the county, when requested by said Judge, to appear in any such examination in behalf of the petition. Any friend of said child may appear in said Court in its behalf, and the said Judge may, in his discretion, request the Supervisor of any township or ward to appear in behalf of the child, yet it shall not be necessary to issue any citation or other notice to other than the parents. The record of the proceedings shall show who, if any one, appeared in behalf of the child on such examination.

SEC. 13. That if on such examination the said Judge shall find that the said child is dependent on the public for support, is over two and under twelve years of age, and is sound in mind and body, he shall enter such finding by a proper order in the journal of the Probate Court in his office certifying that the child is dependent on the public for support and is entitled to admission to the State Public School at Coldwater, and ordering that it be taken to said School by the Superintendents of the Poor and admitted therein, and shall deliver to the said Superintendents of the Poor a certified copy of such order, which shall contain, besides said findings, a statement of the facts that are herein required to be inquired into, so far as they have been ascertained; and that said Superintendents of the Poor shall deliver such copy, with said child, at said School to the Superintendent thereof, as soon as practicable after the making of such order. That upon entering such order the parents of said child shall be released from all parental duties toward and responsibility for such child, and shall thereafter have no rights over or to the custody, services or earnings of such child, except in cases where said Board may, as herein provided, restore the child to its parents.

SEC. 14. The object of this act is to provide a temporary home for dependent children in said School where they shall be retained only until they can be placed in family homes. The said Board is hereby made the legal guardian of all children who shall be received in said School, and it shall be its duty to use special diligence in providing such suitable homes for such children as shall be approved, as herein provided, and to place them therein on a written contract to remain until they are twenty-one years of age, or in the discretion of said Board until they are eighteen years of age. Such contract shall provide for their education in the public schools where they reside, for teaching them some useful occupation, for kind and proper treatment as members of the family

where placed, and for the payment on the termination of such contract to said Board for such children such sum of money as may be provided for in said contract. Whenever any ward of said Board who is not indentured has become self-supporting the said Board may so declare by resolution and thereupon said guardianship shall cease and the child shall thereafter be entitled to its own earnings. Whenever one or both of the parents of any ward of said Board, who is not indentured, have become able to support and educate it, the child may by resolution of said Board be restored to its parents; in which case the suitability of the home shall be certified in the same manner as herein required for placing children on indentures; and thereupon the guardianship of said Board shall cease.

SEC. 15. Whenever inquired of by the Superintendents of the Poor of any county, and whenever there is room for one or more children in said School from any county, it shall be the duty of the Superintendent of said School to notify the Superintendents of the Poor of such county how many children they can send to said School. That whenever there are more admissible children in the several counties than [that] can be received in said School, it shall be the duty of the Superintendent of said School to divide such admissions *pro rata* among the counties according to the number of dependent children in each, at the time of such admission, giving preference to counties of the same or larger population, that have had less admitted into said School. That whenever the Superintendents of the Poor of any county shall be informed by the Superintendent of said School that any dependent children from their county can be admitted into said School it shall be their duty to forward them to said School, as provided in this Act, as soon as practicable. In those counties in which the distinction between township and county poor is maintained, it shall be the duty of the Superintendents of the Poor of such counties, on the written request of the Supervisor of any such township, to act for such township in securing the admission of dependent children to this School, in all respects as though such children were supported by the county. That the expense of transportation of children to said School, pursuant to law, and the expenses [expense] of returning any of said children to their counties, after their admission by said Board of Control, as improper inmates of said School, shall be audited by the Board of State Auditors and paid from the general fund.

SEC. 16. There shall be received into said School those children who have been declared dependent on the public for support as herein provided, and they shall be retained therein until they are sixteen years of age, unless they shall before that time be sent out as herein provided. While in said School they shall be maintained and educated in the branches usually taught in the common schools; they shall have proper moral any physical training and shall be taught how to labor so far as their age and condition will reasonably permit. The said Board is authorized to return to the counties from which they were sent the following classes of children:

First, Those who have become sixteen years of age and who for any reason cannot be placed in or retained in family homes.

Second, Those who by reason of vicious habits or incorrigibility cannot be placed in or retained in family homes.

Third, Those who in the opinion of said Board, based on the certificate of the physician of said School, are of unsound mind or body, or who have some serious physical disability which prevents their being placed in family homes. Whenever any child shall be ordered by said Board to be returned to its county as herein provided the guardianship of said Board shall cease, and the child shall thereupon again become a charge on the county from which it was sent, and the Superintendent of said School in returning any child to its county shall report in writing to the Superintendent of the Poor of the proper county, the action of said Board and the reasons therefor.

SEC. 17. That whenever on the examination provided for in this act the Judge of Probate shall determine that the child is dependent on the public for support, he shall cause it to be examined by the county physician, if there be one, and if not, then by a respectable practicing physician, and shall in no case enter the order in his journal, showing the child is admissible to this School, unless the physician making such examination shall certify in writing, under oath, filed in said Court, that the child examined by him is, in his opinion, of sound mind, and has no chronic or contagious disease, and in his opinion has not been exposed to any contagious disease within fifteen days previous to such examination before the Judge of Probate; that a copy of such certificate shall be attached to the other papers required by this act, to accompany each child to this School.

SEC. 18. That the Superintendent, Agent, or Board of Control of the State Public School is hereby authorized to consent to the adoption of any child who has or shall become an inmate of said institution, by any person or persons, pursuant to the provisions of an act entitled "An act to provide for changing the names of minor adopted

children, and of other persons," approved Feb. 2, 1861; and that on such adoption the said Board of Control shall cease to be guardian of the child so adopted.

SEC. 19. The said Board of Control is authorized to designate some officer, teacher, or other employé connected with said School to be agent thereof, who shall be known as the Agent of the State Public School, and who shall act in that capacity during the pleasure of said Board. That his duties as such agent shall be prescribed by said Board, and shall include visiting, at such time as the Board shall direct, the wards of said Board which have been placed in families, and reporting to said Board the condition of such children, and any failures to comply with the terms of the indenture contracts; and [that] it shall also be his duty to find suitable homes for the children of this school, to investigate applications for such children, and to enter into contracts, in writing, on behalf of said Board, with persons taking such children; such contracts to contain a clause reserving to said Board the right to cancel the same when, in the opinion of said Board, the interest of the child requires it, and may also contain a clause authorizing the person taking the child to cancel the same any time within sixty days from the date of the contract, on returning said child to said school free of all expenses; that the authority herein given said agent is also hereby conferred upon the superintendent of said school; that the salary and necessary traveling expenses of said agent shall be first examined and allowed by said Board, and shall then be audited by the Board of State Auditors, and paid from the general fund.

SEC. 20. The said Board of Control shall biennially report to the Governor, Legislature and Superintendent of Public Instruction, presenting a detailed statement of the operations of said institution for the two fiscal years preceding the regular session of the Legislature, which shall include the report of the treasurer of said Board of Control of all receipts and disbursements in his office for the same period, and the report of the superintendent for the same period, setting forth the condition of said school, the names of regular employés and the salary of each, the number of children who have received instruction, the average number during each year in the school, the discipline prescribed, the studies pursued, the books used, the expense per capita for average attendance, the expense per capita, estimating therein the expenses additional for those indentured, and such other information as he may deem important, or the Governor or Superintendent of Public Instruction may request. The members of said Board of Control shall be allowed the expenses necessarily incurred by them in the discharge of their official duties, and three dollars per day for their official services actually and necessarily performed, which shall be audited by the Board of State Auditors and paid from the general fund. (Here is added a provision exempting this school from Act No. 16 of 1881.)

SEC. 21. It shall be the duty of said Board to obtain information as often as practicable from all the children placed in families from this school, and to secure so far as possible the education and good treatment of such children, and the full performance of indenture contracts. It shall be the duty of said Board to procure written reports from such children at least once in each six months, one of which shall be from the person to whom the child is indentured, and the other from the agent of said school or from the agent of the Board of Corrections and Charities for the county where the child resides, the superintendent of said school to notify the officer he desires to visit the child and make the report. If it shall appear to said Board by such report, or from any other source, that the child visited is neglected or ill-treated, or is not being educated by the person with whom it is placed, or that the person having such child is unfit to have the care thereof, the said Board, or the superintendent of said school, who may be authorized so to do by said Board, shall cancel the contract and cause the child to be returned to said school or removed directly into some other home, and notice thereof shall be given the county agent of the county.

SEC. 22. Any person desiring to take a child from said school by indenture or adoption may apply for that purpose in writing, in such form as said Board shall prescribe, to the superintendent or agent of said school, or to the agent of the Board of Corrections and Charities of the county where the applicant resides. That either of said officers who shall receive such application, other than said superintendent, shall investigate the same, and report in writing to the superintendent, in such form as said Board shall prescribe, the facts ascertained and whether, in his opinion, the applicant is a proper person to have the care and education of the child; and no child of said school shall be placed in a home on trial or by indenture or adoption, unless the same shall be approved by the agent of said school, or by the agent of the Board of Corrections and Charities of the county where the applicant resides. It shall be the duty of the agent of said school or of the agents of the State Board of Corrections and Charities, in their respective counties, to visit the children of said school in families on indenture, at such times as they may be requested so to do by the superintendent of said school, and only at such times; and shall then inquire into the management, condition and treatment

of such children, and shall, as soon as practicable, report to the superintendent of said school the facts ascertained, showing whether the indenture contracts are being faithfully executed; and whenever it shall come to the knowledge of any such officer, so authorized to make such visits, that any child of this school in a family, on trial or on indenture, is being ill-treated, he shall immediately investigate the case and report the facts as aforesaid.

SEC. 23. It shall be the duty of said Board to preserve in said institution all legal papers, reports, and other valuable papers relating to each child, and shall provide and keep suitable record books in which shall be entered, during the time of the guardianship of said Board, a brief history of each child, showing its name, age, county, residence, when received, indentured or adopted; the names, residence, occupation, habits and character of the parents, so far as can be ascertained, and the name, residence, and occupation of the person who has taken the child by indenture or adoption.

DUTIES OF THE COUNTY AGENT REPRESENTING STATE BOARD OF CORRECTIONS AND CHARITIES.

SECTION 1. *The People of the State of Michigan enact*, That the Governor may appoint, in each county of this State, an agent of the State Board of Corrections and Charities for the care of juvenile offenders and dependent children, who shall hold his office during the pleasure of the Governor, and who shall be known as the county agent for the county for which he is appointed. Before entering upon the duties of his office, and within thirty days after receiving notice of his appointment, the said agent shall take and file with the county clerk of the county for which he was appointed, the oath of office prescribed by the constitution of this State; and upon such qualification, it shall be the duty of the county clerk to immediately transmit notice thereof to the circuit judge, each justice of the peace, and all other magistrates of the county having competent jurisdiction for the trial of juvenile offenders, and also to the superintendents of State institutions which place children in families by contract, indenture, or adoption. Said agent shall receive as compensation for his services under this act, his necessary official expenses, together with the sum of three dollar in full, for his services in each case investigated, or visited, and reported on as hereinafter provided, but not exceeding three dollars for any one day's services, which shall be audited by the Board of State Auditors, and paid from the general fund; and when such services and expenses relate to the indenture, adoption, or visiting of the children placed in families by any State institution, the accounts therefor shall be certified by the superintendent of the institution to which the children belong: *Provided*, That the sum so allowed for the services of said agent in any county except the counties of Wayne and Kent, shall not, in any one year, exceed the sum of one hundred dollars, and that in the counties of Wayne and Kent the sum so allowed for such services shall not, in any one year, exceed the sum of two hundred dollars.

SEC. 2. Whenever a complaint is made or pending against any boy under the age of sixteen years or girl under the age of seventeen years for the commission of any offense not punishable by law with imprisonment for life before any court or magistrate having competent jurisdiction thereof, it shall be the duty of such court or magistrate at once, and before any further proceedings are had in the case, to give notice in writing of the pendency to said agent, if there shall be one in said county, who shall have opportunity allowed him to investigate the charge or charges, and upon receiving such notice the agent shall immediately proceed to inquire into and make a full examination of the parentage and surroundings of the child, and of all the facts and circumstances of the case, and report the same to the court or magistrate, who shall advise and counsel with the said agent; and if upon such consultation, after full investigation and proof of the offense charged, it shall appear to the court that the public interest, and the interest of such child will be best subserved thereby, he may make an order for the return of such child to his or her parents, guardian or friends; or he may authorize said agent, under the advice and approval of the judge of probate of the county, to take such child and bind him or her out to some suitable person until he or she shall have attained the age of twenty-one years, or for any less time, or impose a fine, or to suspend sentence for a definite or indefinite period; or if the child is found guilty of the offense charged, and appears to be willfully wayward and unmanageable, the court may cause him or her to be sent to the Reform School, Industrial Home for Girls, or to any State penal or reformatory institution authorized by law to receive such boy or girl, subject to such conditions of sex and age as are now provided by law for the reception of children in said school or institution; and in such cases the report of the agent shall be attached to the mittimus, *and the child shall be placed in charge of the agent, or some*

person designated by him, to be conveyed under his direction to the institution, and for such services the same fees shall be allowed as are paid to sheriffs in like cases.

SEC. 8. Said agent shall visit all children resident in the county for which he is appointed which shall have been indentured to any person therein by any State institution, whenever he shall be so requested to do by the superintendent of the institution which placed such children in said county, and shall inquire into the management, condition and treatment of such children, and for that purpose may have private interviews with such children at any time; and if it shall come to the knowledge of such agent when making such visits, or at any other time, that any child thus placed in charge of any person as aforesaid is neglected, abused, or improperly treated by the person having such child in charge, or that such person is unfit to have the care thereof, he shall report the facts to the superintendent of the State institution by which the child was so indentured, and the board of such institution, or the superintendent thereof who may be so authorized to do by said board, on being satisfied that the interest of the child requires it, shall cancel the indenture by which the child was placed in the family, and shall remove it to some other family home or directly to the State institution from which it was indentured. All indentures by which any child shall be placed in a home from any State institution shall reserve the right in the board making the indenture to cancel the same whenever, in the opinion of that board, the interests of the child require it. Whenever an indenture is cancelled, as herein provided, or whenever any child indentured from any State institution has been adopted, notice thereof shall be given to said agent of the county where the child was indentured by the superintendent of the State institution from which the child was indentured or adopted.

SEC. 4. No child shall be indentured, adopted, or otherwise placed in charge of any person by any State institution during minority, or for any other period unless the applicant for any child shall be first approved in writing by said agent for the county where the applicant resides, or by the State agent of the State institution to which the child belongs, in such form as may be prescribed by the board of such State institution. Such approval shall be filed with the superintendent of the State institution to which the application is made before the child shall be indentured or adopted.

SEC. 5. It shall be the duty of said agents, in their respective counties, to seek out suitable persons who are willing to take by indenture or adoption, and take charge of, educate and maintain children arrested for offenses, committed to any State institution, or abandoned, neglected, or dependent children in charge of any State institution, or its officers, and to give notice when such children may be so placed, to the board, officers, or superintendent having authority to dispose of such children by indenture or adoption. And said agents shall make regular or special reports of their doings under this act, to the superintendent of any State institution when so requested by him, in reference to applications for, or visiting any child belonging to the State institution of which he has charge. Said agents shall also report as aforesaid their doings under this act to the State Board of Corrections and Charities whenever so requested by said Board.

SEC. 6. It shall be the duty of the superintendent of the Reform School, and the principal officers of any State institution for the care or reformation of juvenile offenders now or hereafter to be established, upon the discharge of any boy or girl received therein, forthwith to notify the agent of the Board of Corrections and Charities, residing in the county from which such child was sent, of such discharge; or if the boy or girl so discharged shall return to such county, the agent shall, as far as possible, assist him or her in procuring suitable employment and a good home, free from immoral and evil influences. Said agent shall also keep a brief history of each child within his county discharged as aforesaid, in a manner and form to be prescribed by the board of which he is agent, and report the same from time to time to said board as it may require, to the end that the effect of the treatment and discipline of the several institutions of the State for the care and reformation of juvenile delinquents, upon their discharge therefrom, may be better known and understood.

AN ACT TO PROVIDE FOR THE PROTECTION OF CHILDREN.

SECTION 1. *The People of the State of Michigan enact*, That any person having the care, custody, or control of any child under sixteen years of age, who shall exhibit, use or employ, or who shall apprentice, give away, let out or otherwise dispose of any such child to any person in or for the vocation, service, or occupation of rope or wire walking, gymnast, contortionist, rider or acrobat, dancing, or begging in any place whatsoever, or for any obscene, indecent, or immoral purpose, exhibition or practice whatsoever, or for any exhibition injurious to the health, or dangerous to the life or

limb of such child, or who shall cause, procure or encourage such child to engage therein, and any person who shall take, receive, hire, employ, use, exhibit, or have in custody any such child for any of the purposes mentioned in this section, shall be deemed guilty of a misdemeanor.

SEC. 2. No minor child under sixteen years of age shall be permitted to remain in any saloon, bar-room, or other place where any spirituous or intoxicating liquor, or any wine or beer, or any beverage, liquor or liquors containing any spirituous or intoxicating liquor, beer, or malt liquor is sold, given away, or furnished for a beverage; or in any place of amusement known as dance-house, concert saloon, variety theatre; or in any house of prostitution; or in any room or hall occupied or used for hire, gain or reward, for the purpose of playing billiards, nine-pins, cards, dice, or any other unlawful game, or in any room or hall used or occupied for gaming, pool-selling, or betting in any manner whatever. Any proprietor, keeper, or manager of any such place, who shall permit such child to remain in any such place, and any person who shall encourage or induce in any way such child to enter such place or to remain therein, shall be deemed guilty of a misdemeanor, and on conviction thereof, shall be punished by a fine of not less than twenty-five dollars, nor more than fifty dollars, or by imprisonment in the county jail not less than ten days nor more than thirty days (or by both fine and imprisonment in the discretion of the court).

SEC. 3. No child under sixteen years of age held for trial, or on conviction in any jail or other place of confinement, shall be placed or allowed to remain in the same cell or room in company with adult prisoners. It shall be the duty of the officer in charge of such place of confinement, to secure as far as the construction of such place will admit, the exclusion of such children from the society of such adult prisoners during their confinement.

SEC. 4. That on and after January first, eighteen hundred and eighty-two, it shall not be lawful to place or maintain in any county poor-house any child who by law is admissible to the State Public School. That whenever, after that date, there shall be in any county poor-house any such children who cannot be received in said school for the reason there shall be then no room for them, it shall be the duty of the superintendents of the poor of such county to place and maintain such children, at the expense of such county, in some suitable family or charitable institution until they can be received in said school: *Provided* That nothing in this act shall prevent any county from maintaining and educating such children in a building separate from the county poor-house, devoted to the sole use of children of sound mind and body and cared for by other than pauper labor: *And provided further*, That no child under the age of two years shall be separated from its mother, if such mother shall be an inmate of such county house: *And provided further*, That no child under the age of four years shall be separated from the mother, if such mother shall be an inmate of such county house, without the consent of the mother.

SEC. 5. Any person who shall sell, give away, or in any way furnish to any minor child any book, pamphlet, or other printed paper or other thing, containing obscene language, or obscene prints, pictures, figures, or descriptions tending to the corruption of the morals of youth, or any newspapers, pamphlets, or other printed paper devoted to the publication of criminal news, police reports, or criminal deeds, and any person who shall in any manner hire, use, or employ such child to sell, give away, or in any manner distribute such books, pamphlets, or printed papers, and any person having the care, custody, or control of any such child, who shall permit him or her to engage in any such employment, shall on conviction thereof be deemed guilty of a misdemeanor.

SEC. 6. Every person who shall exhibit upon any public street or highway, or in any other place within the view of children passing on any public street or highway, any book, pamphlet, or other printed paper or thing containing obscene language or obscene prints, figures, or descriptions tending to the corruption of the morals of youth, or any newspapers, pamphlets, or other printed paper or thing devoted to the publication of criminal news, police reports or criminal deeds, shall, on conviction thereof, be deemed guilty of a misdemeanor.

SEC. 7. That any person desiring to have a minor child apprenticed, bound out, indentured, given away, or otherwise disposed of to him or her by the persons or officers herein authorized to dispose of such child, by either of the methods stated, may apply in writing to the county agent of the State Board of Corrections and Charities, or to a superintendent of the poor of the county where the applicant resides, requesting him to examine and report in writing on the suitability of the home of said applicant for the child, and thereupon it shall be the duty of such agent or superintendent to make such examination and report; and in no case shall any such child be apprenticed, bound out, indentured, given away, or otherwise disposed of, to any such applicant unless

such certificate shall show that the applicant is a person of good moral character, that he is able to support and educate the child, and that his or her home is a suitable one for the child. That such application and certificate shall be filed in the probate court of said county on the payment by said applicant to said agent or superintendent the sum of three dollars for his services under this act.

SEC. 8. That on filing said application and certificate a contract in writing shall be entered into by and between said applicant and the person authorized to dispose of the child, in which the latter shall agree that said child may remain with said applicant until it is eighteen or twenty-one years of age, as may be agreed on by the contracting parties; that said applicant shall support said child, and treat him or her as a member of his family; that he will keep him or her in school at least four months in each year; that he will teach him or her some useful trade or occupation, and that should said agent or superintendent at any time deem the interest of the child requires it, he may, with the approval of the judge of probate of the proper county, cancel said contract, assume possession of the child, and re-indenture him or her in the manner herein provided.

SEC. 9. It shall be unlawful for any person to indenture, apprentice, bind out, or otherwise dispose of any minor child to any person except by the following methods:

First, Under this act by the parents residing in this State, and if either be dead or of legal incapacity, or has abandoned the child, then by the other, and in case there is no father or mother resident of this State of legal capacity who has not abandoned the child, then by a guardian of the child, resident of this State, duly appointed under the laws thereof;

Second, In accordance with act number one hundred and twenty-six of the session laws of eighteen hundred and eighty-three, being chapter two hundred and forty-one of Howell's Annotated Statutes;

Third, By the officers of State institutions authorized by law to place children in families by indenture or otherwise;

Fourth, By the officers of asylums for children incorporated under the laws of this State and authorized to place children in families by indenture or otherwise;

Fifth, In accordance with chapter two hundred and forty-two of Howell's Annotated Statutes, and all acts amendatory thereof, entitled "Changing names of minors and others, adoption and change of names of minors." And in no case shall any child be indentured, apprenticed, bound out, adopted or otherwise disposed of by any of the methods named herein or under any law of this State except on the approval of the person taking the child and on indenture as provided in this act. Any person having the custody, care or control of any minor child who shall indenture, apprentice, bind out, give away, have adopted, or otherwise dispose of such child to any person, and any person who shall take such child indentured, apprenticed, bound out, given away, adopted, or otherwise disposed of to him or her except in the manner herein named shall be deemed guilty of a misdemeanor.

SEC. 10. This act shall apply to all children brought into this State from other States by or for societies taking care of destitute, abandoned or orphan children, which children would be a State, county or town charge except as taken by indenture or given to persons to adopt or take charge of in this State. All acts or parts of acts inconsistent with the provisions of this act are hereby repealed.

AN ACT TO PROVIDE FOR THE MEDICAL AND SURGICAL TREATMENT OF DEPENDENT CHILDREN AT THE HOSPITAL OF THE MICHIGAN UNIVERSITY.

SECTION 1. *The People of the State of Michigan enact*, That any dependent children who are or who shall hereafter be inmates of the State Public School at Coldwater, and those who are not inmates of said institution, but who, if not affected by disease or requiring surgical treatment, would be entitled by the laws of this State to admission to said institution, who may be suffering from chronic disease, or who may need surgical treatment for any cause which is calculated to disable them in whole or in part from self-support, shall be entitled to and shall receive medical and surgical treatment, or either, together with board, lodging, nursing, and other proper care, free of charge, at the hospital established in connection with the Michigan University at Ann Arbor, under the general rules and regulations thereof.

SEC. 2. The admissibility of applicants under this act for such gratuitous treatment, if not inmates of said State Public School, shall be determined and certified in the same manner as their admissibility is now determined and certified to the said State Public School; and in case of dependent children who are or may be inmates of the State Public School, it shall be determined and certified by the superintendent thereof.

SEC. 3. The expenses of conveying said dependent children, whether inmates of the State Public School or the other class herein named, to and from said hospital, and their board and nursing and other care in said hospital, shall be paid out of the appropriation provided by this act: *Provided*, That such transportation expenses shall not include the expenses or services of any person accompanying the child to and from said hospital.

SEC. 4. Before any such dependent child shall be sent to such hospital for treatment, a description of the case by the physician of said institution, with his opinion thereon, or if the child be not an inmate of said institution, then a description of the case by the county physician, where there is one, and if there is no such county physician, a description of the case by some practicing physician, with his opinion thereon, shall be sent to the physician in charge of said hospital: *Provided*, That no such dependent child shall be sent to or received into said hospital unless, in the judgment of the physician in charge thereof, there is a reasonable chance for him to be benefited by the proposed medical or surgical treatment.

SEC. 5. No physician, surgeon, or employé connected with said hospital shall receive any extra compensation by reason of aiding in the medical or surgical treatment, or the board, nursing, or other care of said children.

SEC. 6. The actual expenses for the transporting of dependent children to and from said hospital as provided in this act, and the board, nursing, and other care for said children while in said hospital, not exceeding the amount charged other children, patients in said hospital, shall be audited by the Board of State Auditors, and paid out of any money in the State treasury not otherwise appropriated. The Treasurer of the Board of Control of the State Public School shall present all accounts for the transportation of children to and from said institution and said hospital, and shall receive payment thereon; the county treasurer of the proper county shall present such accounts and receive payment thereon for children sent from such county; and the treasurer of said university shall present the accounts for the board and nursing of said children and shall receive pay thereon; all which accounts shall be verified as required by said Board of State Auditors.

OFFENSES AGAINST THE LIVES AND PERSONS OF INDIVIDUALS.

SEC. 30. Every person who shall maliciously, forcibly, or fraudulently lead, take, or carry away, or decoy, or entice away any child under the age of twelve years, with intent to detain, or conceal such person from its parent, guardian, or other person having the lawful charge of such child, shall be punished by imprisonment in the State Prison not more than ten years, or by imprisonment in the county jail not more than one year, or by fine not exceeding one thousand dollars.

SEC. 31. If the father or mother of any child under the age of six years, or any other person, shall expose such child in any street, field, house, or other place, with intent to injure or wholly to abandon it, he or she shall be punished by imprisonment in the State Prison not more than ten years.

SALE OF LIQUORS TO, AND PLAYING AT GAMES BY STUDENTS AND MINORS WHERE LIQUORS ARE SOLD.

SECTION 1. *The People of the State of Michigan enact*, That it shall not be lawful for any person, by himself, his clerk or agent, to permit any student in attendance at any public or private institution of learning in this State, or any minor to play at cards, dice, billiards or any game of chance, in any part of any building, in which spirituous liquors or intoxicating drinks are sold; nor shall it be lawful for any person, by himself, his clerk or agent, to sell or give to any student in attendance at any public or private institution of learning in this State, or any minor any spirituous or intoxicating drinks, except when prescribed by a regular physician for medicinal purposes; and any person who shall offend against either of the foregoing provisions of this act, in addition to the penalties now provided by law, shall be deemed to have been guilty of a misdemeanor, and on conviction thereof, shall be fined twenty dollars and the costs of prosecution, and in default of payment thereof, shall be imprisoned in the county jail for sixty days. [Section 2267, *Howell's Annotated Statutes*.]

SALE OF LIQUORS TO MINORS UNDER EIGHTEEN YEARS OF AGE.

SECTION 1. *The People of the State of Michigan enact,* That every person who shall by himself, or by any clerk, servant, agent or employé, sell, give or furnish, or cause to be sold, given, or furnished, any intoxicating, spirituous, malt, brewed, or fermented liquors, cider, or wine, or any liquor or beverage, any part of which is intoxicating, spirituous, malt, brewed, or fermented to any minor under the age of eighteen years, and every person who shall himself, or by his clerk, servant, agent, or employé, permit or allow any such liquor, cider, wine, or beverage to be sold, furnished, or given to, or to be drank by any such minor, in his or her store, shop, saloon, restaurant, bar-room, or place of business where such liquors or beverages are kept, furnished, or sold, shall be liable for both actual and exemplary damages therefor; to the father, mother, guardian or master, or any person standing in place of a parent to such minor, in such sum, not less than fifty dollars in each case, as the court or jury shall determine; except a druggist upon the written request of a parent, guardian, or master of such minor, or upon the written prescription and request of a regular practicing physician: *Provided,* That the physician making such prescription shall not be the druggist himself, nor a member of the firm of druggists selling such liquor, nor an employé of such druggist or firm. But if any druggist shall furnish, sell or give to any such minor any such liquor more than once upon the same written prescription or written request, he shall be liable in damages therefor as aforesaid, and to the extent aforesaid in each case.

SEC. 2. The damages in all cases provided for in this act, together with costs of suit, shall be recoverable in action of trespass on the case before any court of competent jurisdiction. And in any case where parents shall be entitled to such damages, either the father or the mother may sue alone therefor. But recovery by one of said parties shall be a bar to a suit brought by the other. [Sections 2268-69, *Howell's Annotated Statutes.*]

SENDING CHILDREN TO THE STATE PUBLIC SCHOOL.

While the law specifies the general form to be observed in sending children to this school, errors are so frequently found in the proceedings, that we make these suggestions.

No child can be admitted to the school without the proper probate order and medical certificate. Time should be taken before sending the child to perfect all the details, as any irregularity in the proceedings and order might invalidate the whole action.

THE APPLICATION.

At least two of the Superintendents of the Poor of any county should unite in a petition to the Judge of Probate, asking that a day be set in which he will examine into the supposed dependence of the child named in the petition.

The petition should give the name and residence of each of the parents, if living, or of either whose name and residence is known.

If either of the parents is dead, or residence and whereabouts unknown, it should be stated in the petition.

If parents are dead, or residence unknown, give name of person, if any, known to be a friend of the child.

If no parent, or other relative or friend is known, the fact should be stated, that the Supervisor of some township or ward may be notified to appear in behalf of the child at the requested hearing.

THE PROBATE ORDER.

The order of the Judge of Probate should set forth the fact of the petition of the Superintendents of the Poor. It should give the names and residence of the parents, if known.

If either parent is living, the order should show that notice of the intended hearing was given such parent at least two days before the time set for the hearing.

If parents are dead or residence unknown that fact should be stated. If parents are dead, or whereabouts unknown, and other relative or person is known, who is a friend of the child, the order should show that such friend has had notice of the intended hearing asked for in the petition of the Superintendents of the Poor.

If parents or other relatives are not known, the order should show that the supervisor of some township was notified of the intended hearing.

The order should show that either one or both the parents, or some relative or friend, or the supervisor of some township or ward, did appear at the hearing when the child named in the order was adjudged dependent.

In case either parent appears in court upon day of petition, or if parents are shown to be dead, or residence unknown, and other near relative or friend of the child appears, delay for service of notice would be unnecessary.

The above proceedings regarding service of notice and statement of facts regarding it in the order, are essential in order to conform to the law.

The order should show that the child has been examined by a physician, and that such examination showed that the child is of sound mind and has no chronic or contagious disease, and has not been exposed to any contagious disease within fifteen days previous to such examination. The examination should be by the county physician, if there is one.

The age of the child, year, month and day, should be definitely stated in the order.

As full a history of the child and its parents as is possible to gather should be inserted in the order.

A definite statement that the child shall be sent to and admitted into the State Public School should be inserted.

A certified copy of the order, with the medical certificate of the examining physician, must accompany each child, as no child can be admitted except upon presentation of the order and medical certificate to the Superintendent of the School.

The medical examination is very important, as it is easy to endanger the lives and health of a large family of children by the sending of one child infected with some contagious disease.

The object of the school is to place children in family homes as rapidly as possible, so children who, by reason of their physical or mental condition, would not do for a home, are not properly admissible to this school.

It is earnestly hoped that officers having in charge the work of sending children to the school will aid in every way to make the school just what the law intends it to be—a temporary home—and prevent sending children who are not in such condition of mind or body as will enable them to be placed in homes.

It is desired that the courts will aid in gathering as complete information as possible regarding the parents ; whether permanent paupers, or simply temporarily dependent ; whether criminal or not ; whether educated or uneducated ; the calling or business in which the parents may have engaged ; their habits regarding attendance at church, industry, and the kind of training given the child ; also whether native or foreign born.

A form of application and probate order are herewith appended :

FORM OF APPLICATION OF SUPERINTENDENTS OF THE POOR.

STATE OF MICHIGAN, }
COUNTY OF..... } ss.

Probate Court for said County.

To, Judge of Probate for said County.

In the matter of, an alleged dependent child.

Your petitioners would respectfully represent to the Court that they are Superintendents of the Poor of said county of ; that said child is a resident of said county, between two and twelve years of age, in suitable condition of mind and body to receive instruction, without means of support, and is dependent and neglected. Your petitioners further represent and certify that in their opinion said child is dependent on the public for support, and has no parents against whom h.... support can be enforced as provided in Chapter forty-nine of Howell's Annotated Statutes.

Your petitioners further represent that it is necessary that said child should be sent to the State Public School for dependent and neglected children at Coldwater.

Your petitioners further represent that the names and residence of the parents or friends of said child, as your petitioners are informed and believe, are as follows :¹

.....

Your petitioners therefore pray that a day be fixed for hearing this petition, and that a citation issue to be personally served upon the parents of said child, if any, and if none can be found, then upon some friend, if any, of said child, and if neither parent nor friend can be found, then on some Supervisor of some ward or township in said county not less than two days before the time set for said hearing, requiring them to appear on said day and show cause, if any, why said child should not be sent to said State Public School as aforesaid ; and after a full hearing and examination in the premises, that thereupon an order may be entered in this cause finding said child dependent upon the public for support and requiring that he be sent to and admitted into the said State Public School according to the statute in such case made and provided.

Dated the....day of....., A. D. 18....

..... }
..... } *Superintendents*
..... } *of the Poor.*

NOTE—1. State here the names and residences of parents, if living and known. If one or both are dead, or have abandoned their children, state it here. If no parents living or residence unknown, give the name of person, if any, known to be a friend of the child.

NOTE—2. The petition must be signed by at least two Superintendents.

FORM OF PROBATE ORDER.

STATE OF MICHIGAN, } ss.
COUNTY OF

At a session of the Probate Court for the County of holden at the Probate office at in said county, on the day of in the year one thousand eight hundred and eighty

Present, Hon. Judge of Probate.

In the matter of a dependent and neglected child, and Superintendents of the Poor of said county, having on the day of, A. D. 188, made and presented to me, the Judge of Probate of said county, an application in writing for an examination and determination by this court as to the dependence of said child on the public for support, certifying therein that in their opinion the child named is dependent on the public for support, and that he has no parents against whom his support can be enforced, as provided in chapter forty-nine of Howell's Annotated Statutes; that said child is between two and twelve years of age, and is sound in body and mind; requesting that an order be made by this court, finding said child dependent on the public for support and that he be sent to and admitted into the State Public School at Coldwater. That by such application it appears that the names and residence of the parents or friends of said child are as follows:¹

It was thereupon ordered that the day of, A. D., 188 at o'clock in the noon, at the office of the said Judge of Probate, be fixed for making such examination, and that a citation of the time and place of such examination be duly served on the parents of said child if they can be found, and if not then upon some friend of said child, if any can be found, and if no parent or friend can be found, then on a Supervisor of some township or ward in said county, at least two days before the time fixed for said examination, and that said applicants shall produce said child before me at my office at the time fixed for said examination.

Said cause having this day come on for hearing, said child was brought before me by said Superintendents, and it appearing to me, on due proof by affidavit filed in this court, that said citation was duly served on at least two days before this day, and said Superintendents of the Poor appearing on behalf of said application, and appearing on behalf of said child, whereupon testimony was taken before me on behalf of said applicants and testimony was taken on behalf of said child, and said child having been examined by me, and upon filing the affidavit of⁴ a physician, showing that such child is, in his opinion, of sound mind, and has no chronic or contagious disease, nor has been exposed to any contagious disease within fifteen days previous to such examination, and upon investigation of the facts, it satisfactorily appears to me that said child belongs to said county of and that he is dependent on the public for support, and as such is entitled to admission to the State Public School for dependent and neglected children, at Coldwater.

And upon said examination I do further find, so far as I can ascertain the facts, that said child was the age of years, on the day of 188 ...; and that he has been maintained at for a period of years and months last past,⁵

.....; that the name of the father of the child is; that he resides at in the county of in the State of⁶

.....; that the name of the mother of the child is; that she resides at in the county of in the State of⁷

It is therefore ordered that said child shall be sent to and admitted into the said State Public School at Coldwater.

..... Judge of Probate.

NOTE—1. Must be signed by at least two. 2. Give names and residence of parents, if known; if not, some friend of the child. 3. State on whom served. If not served give reasons for the same. 4. County physician, if there is one.

NOTE—5. State here whether the child was reared by the parents, in the city or country, how long it has attended school, whether it has been taught religious observances, what its associations have been, whether it has committed any offense against the law, if so, what offense, and how punished, and what is its mental and moral condition.

NOTE—6. Here state what education the father has, whether a pauper, temperate, diseased, a criminal under sentence, and if so, for how long, his nationality, number and names of children living, if any, and whether he has abandoned any.

NOTE—7 Here give same information regarding the mother and whether her character is good. Follow generally with any material facts showing cause of the child's being dependent.

STATE OF MICHIGAN, } ss.
COUNTY OF

On this....day of....., A. D. 188..., before me,....., in and for said county, personally appeared....., M. D., to me known as a respectable practicing physician of said county, who being by me duly sworn, deposes and certifies he has examined as physician.....

.....on the....day of....., 188..., a child claimed to be dependent on the public for support, and that in his opinion the said child is of sound mind, and has no chronic or contagious disease, nor has been exposed to any contagious disease within fifteen days previous to this date.

[Signed]

Subscribed and sworn to before me, this day of, A. D. 188...
.....

STATE OF MICHIGAN, } ss.
COUNTY OF

I do hereby certify that the foregoing is a true copy of the original order and findings by me made in the above entitled matter, and of the whole thereof, and that the above is a true copy of the affidavit of the physician filed in this case.

In witness whereof I have hereunto set my official signature, and affixed the seal of the Probate court of said county, at....., in said county, on this.....day of, in the year one thousand eight hundred and eighty.....

.....
Judge of Probate of said County.

HOW TO GET CHILDREN FROM THE STATE PUBLIC SCHOOL, EXTRACT FROM CIRCULAR TO THOSE ENQUIRING.

[AUTHORIZED BY THE BOARD.]

To aid in securing homes, and to answer some of the many inquiries about the method to be pursued to secure one of these children, this circular is issued. Its careful perusal is desired.

HOW TO OBTAIN A CHILD.

1. It is always best, though not necessary, for the applicant to visit the School to select the child and execute the contract. But, whether he comes or sends, he must

2. Make an application in writing on blanks provided for that purpose, which will be furnished to any one on request. This blank should be read very carefully, filled, except the name of the child, unless one has already been selected, then signed and

3. Presented for approval to the agent of the Board of Corrections and Charities for the county in which the applicant resides.

4. This agent will then enquire into the fitness of the proposed home, and, if he can sign the following, he will consent to the placing of a child in that home :

After a careful examination, by me made, I hereby certify that the statements of the within named applicant are true, that he has a good home and that he is a proper person to have the care and education of said child. I further certify that he is a person of good moral character, that he is temperate, that he does not sell intoxicating liquors as a beverage, and that I believe he will properly provide for and educate said child, and will otherwise faithfully execute the indenture required. I do hereby approve his home for said child.

5. No child will be placed in a family on trial, or on indenture without the approval of the agent of the Board of Corrections and Charities in any county where there is one to act.

6. When the application is approved, it must be presented at the School with a description as complete as possible of the child desired—giving age, sex, etc. Especial pains will then be taken to select the child desired.

7. Two indentures will then be sent to the applicant—together with a statement of the money necessary to pay the child's railroad fare and other expenses from Coldwater to his destination.

8. These papers are to be signed and returned to the School together with the money for expenses mentioned before. The indenture will then be dated and otherwise completed and returned to the applicant. The child will be sent on such a day as may be agreed upon by correspondence.

THE CHILD TO SELECT.

As there are many more boys than girls at the School, one can more readily select a satisfactory child from the former. In deciding upon the age, it is better to choose as young a child as possible, for it will sooner adapt itself to the new home and become as one of the family. It will not remember its former life, and will look upon its foster-parents as its own. The average age of the children in the school at present is between seven and eight years. There are few over ten and none under two. Those under ten are, as a rule, much more desirable than those over, and it would be well for the applicant to take this into consideration when making his selection. Further, a child under ten is too young to be obtained for the work he can do. He should rather be taken as an own child, and the younger he is, the more gratified in time will the applicant be with his selection.

HOW TO TREAT THE CHILD ON TRIAL.

Having taken the child on trial, perfection should not be expected. Those reared in the best families have their faults. They should have a full and generous trial. Loving and parental care, teaching, kind admonition and correction, will encourage the child and correct its faults. The discipline should be firm and such as will ensure truthfulness, industry and obedience. No one should be soon discouraged, for on the success of the trial may depend the future welfare of the child. The guardians should remember that they too were once children and required admonition and kind correction; that they too were forgetful, that it required years for them to learn to work, to study in school, and to exercise good judgment in caring for their parents' interests. Some guardians expect a boy who has never lived on a farm to learn how to do the chores, such as milking, caring for the horses, cows, sheep and hogs, all in a few weeks. If the guardian will be as patient with a foster-child's shortcomings as he would be with those of an own child, if he will be affectionate yet firm in his discipline and instruction, he will generally win the child's affection in return, and the home will be a permanent one.

THE INDENTURE.

By reference to the form of the contract under which a child leaves the School, it will be seen that the proposed foster-parents have sixty days in which to approve the child, and, at the end of that time, if he is unsatisfactory, he may be returned at their expense. If not then returned, the contract becomes absolute and can be annulled only by the Board of Control whenever it may deem the interest of the child demands it. The contract provides for the kind treatment of the child as a member of the family, for its proper support, for its education in the public schools, for training it in some useful occupation, and for the payment of a small sum of money when the child is of age. This sum is made payable to the Board of Control, which collects it and pays it to the child. While the child is on indenture, the home will be occasionally visited by the state or county agent.

THE ADOPTION OF CHILDREN.

The indenture is not adoption and gives no authority to change the name of the child. Legal adoption can be made only on consent of the Superintendent, agent, or Board of Control of the School, and by proceedings in the probate court for the county where the guardian resides. While their consent to adoption may be obtained immediately upon the taking of the child from the School, the authorities always advise that the child be taken on indenture first, and given a good thorough trial before adoption papers are asked for. When asked for, if it seems best, the proper papers for adoption, and instructions, will be sent by the School. An adopted child ceases to be a ward of the School and becomes the legal heir of the person adopting him. Since the Institution was established nearly 200 of its wards have been adopted by guardians, who first took the children on indenture. The ratio of adoption to the number received is constantly increasing.

APPEAL.

There is no better or higher missionary work than that which receives and educates one of these little ones and brings it up to self-supporting citizenship. No work can be more satisfactory than that which earns and receives the gratitude of the child that has no homesave that which the noble State or the generous citizen provides.

We address you, desiring you to assist to make worthy men and women of these children, who have been thrown upon the care of the State by unfortunate circumstances over which they have no control. We ask you to make a home for a child, that you give it home training and parental care; that you teach it to labor, to be respectful, obedient and truthful; in short, that you use your best efforts so to train the child that when it arrives at majority, it can without embarrassment take its place among those who never had their early life blighted by misfortune.

COPY OF CIRCULAR.

[Authorized by the Board.]

STATE PUBLIC SCHOOL, }
Coldwater, 1888. }

To the Agents of the Board of Corrections and Charities:

GENTLEMEN:—It is intended to have you visit in your respective counties within twelve months all children on indenture from this institution who, in your discretion, need visiting. In order to secure three reports each year, one from you, one from the State agent, and one from the guardians, the State has been divided into three sections, and the reports are to be asked for four months apart. This will render it necessary to send out requests for visiting to the county agents and guardians four months from each other. Hence some will receive the request this month, others in four months and others in eight months. Thereafter the reports from the county agents can be made by each about one year apart. When the request to visit is made you will be furnished with a list of the children on indenture and the time of the visit will be stated. Until that notice is received it is very desirable that you should continue to investigate promptly and report on all ill-treated children, and as herein requested, the children on trial, and aid us in securing new homes. Your earnest and cordial co-operation is solicited.

DISCRETIONARY VISITS.

When you receive a request to visit you will find part of the names entered under "Discretionary List." This is to indicate that the management of the School is of the opinion that those children do not need visiting. There are no doubt in your county some of the children, and generally the younger ones, who have been on indenture some time, who are treated, in all respects, as own children and who, in your opinion, do not need to be visited. Where these children have become thoroughly identified with the members of a good family, it is not considered that they or the family will be benefited by such visits. Neither ought the State to be put to the expense. Some of these children have forgotten their own parents and look upon their foster parents as their own. Their own parents cou'd do no better for them, even if situated so as to care for them. In such cases any visits that would inform them of their parentage would greatly wrong them. Children have lost good homes by such visits and some of the best guardians object to them. But if in your judgment any of the children whose names are on the discretionary list do need visitation, you are to see them. If there is any doubt in your mind about the necessity, in any case, give the child the benefit of the doubt and visit it. All visits to the youngest children especially should be conducted with prudence and consideration for the children and guardians.

ILL-TREATED CHILDREN.

Whenever it shall come to your knowledge that any child of this school in a family on indenture or on trial is being ill-treated, you are required by law to investigate the case immediately and report the facts to the Superintendent. You are not to wait to consult him and obtain a request to visit. You are to use your discretion. Ill-treatment has various forms. It is a failure to comply with any provision of the indenture. If the child is not used as one of the family, as to food, lodging, etc., that is ill-treatment. If the child is not sent to day and Sunday school, and to church, if he is brought up in idleness, under bad influences, in bad company, that is ill-treatment as much as the infliction of unreasonable punishment. They are not placed out as servants. They are to have a good chance in life with the other boys and girls where they live. As a general rule the treatment of these children in families is all that can be desired. But when there are cases of ill-treatment, by which the child is deprived of its natural privileges or rights under the indenture, you will be sustained in all proper efforts for his protection.

CHILDREN ON TRIAL.

You are requested to visit hereafter all children soon after they have been placed in homes you have approved, say after thirty days and before the expiration of the sixty days' trial. This will enable you to determine more fully whether the home is all your investigation showed it to be and whether the child and home are adapted to each other. On such visits your advice will be helpful to make the child contented and to secure from the guardian a full, fair and patient trial. The first few weeks of that trial are of great importance to the child and guardian, and the future welfare of both may depend much upon the result. Your early and kind attention to the interests of both may often secure the retention of the child in a home that in time will prove all that could be desired or may show you that the child should be taken away. If on such visits you think the child should remain, do all you can to have it retained. At the same time, if you find you have not located the child well, then the sooner it is placed in another home or returned to this School the better.

THE COUNTY AGENT AND THE STATE AGENT.

It is expected that the State agent will visit all indentured children at least once each year. Whenever practicable he will see you at the time of his visits and confer with you on this work. It is desirable to secure co-operation and improvement in methods of visiting.

HOW VISITS SHOULD BE CONDUCTED.

The purpose of your visits is defined by law. You are to enquire carefully into the management, condition, and treatment of the children and to report the facts ascertained showing whether the conditions of the indenture are faithfully executed. But how the work is to be conducted is necessarily left to your tact and good sense. The end to be obtained is always the same—the respectful and grateful consideration of the guardians, who often from kindest motives have taken these children to care for and educate, and the welfare of the children. The facts relating to the children and guardians you will gather from them and sometimes from others. But how much from each and in what manner, your prudence will determine. Generally the appearance of the child and the home will go far to satisfy you. To visit a home so as to benefit both the home and the child is what is desired and is a responsible and delicate duty. Careful consideration and experience are needed. The hurried call of a few moments, without seeing the child or guardians, asking a few questions of some one and hurrying away, scarcely informs you of the home or the child and fails to impress upon the child, the guardian, or the neighborhood your interest in the work. Such visits however are seldom made. You should make the visit as though you had a personal interest in the child and the family. The more you become acquainted with the child and guardian, with their tastes, aims, habits, etc., the greater will be your success.

In some instances, doubtless, you will discover that the relations between guardian and child are not as satisfactory as they should be. It may be difficult for you to determine where the fault lies, but it is to be hoped you may ascertain the cause of any estrangement and give such advice and admonition as may be needed to harmonize differences.

Your experience in the management of indentured children will probably prove to you that the causes of trouble between guardian and child may lie in either or both, or, somewhat frequently, in the interference of meddlesome neighbors. Wherever the fault may be it should be traced to its source and, if with the child, reprove kindly yet earnestly; if with guardians or neighbors, advise fearlessly though discreetly. The amicable adjustment of differences will depend largely upon your tact and wisdom.

These words will go to some whose long experience has especially fitted them for this work and they will need no suggestions. But for all, these words are written as respectful opinions of methods for doing in the best manner all that should be done for the children in our care. We assure all agents of the sincere, cordial, and earnest co-operation of this institution. We also assure them that their labors and successes are appreciated. Whatever is said here is to aid in securing the most thorough, deliberate, and prudent visits by the county agents, with the belief that the more consideration and care there may be given by the county agents the better will be the results in general of this institution.

SECURING HOMES FOR CHILDREN.

When visiting children you will be of great assistance by finding and investigating new homes. For this work you are compensated the same as for visits, and the law imposes on you this duty to find and to inspect homes for children. If you have placed a good boy or girl in a good home there are generally openings for others in the same neighborhood. Will you not on your visits make securing new homes one of the principal objects, and thus greatly enlarge the usefulness of your position and the work of this institution?

MEMBERS OF THE BOARD OF CONTROL.

(From the organization to the present time.)

COMMISSIONERS TO SELECT THE SITE AND ERECT THE BUILDINGS.

Names.	Date of Commission.	Expiration of Term.	Remarks.
Gov. Henry P. Baldwin, <i>ex-officio</i> .	Apr. 17, 1871..	Jan. 1, 1873..	From the approval of the law, while Governor.
John J. Bagley	July 31, 1871..	Jan. 1, 1873..	Became Governor on latter date.
Nelson G. Isbell	July 31, 1871..	June 7, 1872..	Resigned.
Charles E. Mickley	July 31, 1871..	Apr. 1, 1875..	Re-commissioned.
Julius S. Barber	June 7, 1872..	Jan. 3, 1874..	Vice Isbell, resigned.
Gov. John J. Bagley, <i>ex-officio</i>	Jan. 1, 1873..	May 13, 1874..	While Governor until opening of the school.
Caleb D. Randall	Jan. 6, 1873..	Apr. 5, 1875..	Vice Bagley, re-commissioned.

BOARD OF CONTROL.

Charles E. Mickley	Apr. 1, 1875..	July 23, 1876..	Vacancy declared.
Caleb D. Randall	Apr. 1, 1875..	Jan. 1, 1891..	Commissioned in 1873, '75, '79 and '85.
Stephen S. Cutter	Apr. 1, 1875..	Nov. 13, 1875..	Resigned.
James Burns	Nov. 16, 1875..	Jan. 1, 1883..	Vice Cutter, and re-commissioned in 1877.
Henry H. Hinds	July 23, 1875..	Jan. 1, 1881..	Vice Mickley, and re-commissioned in 1877.
Isaac A. Fancher	Mar. 22, 1881..	Jan. 1, 1893..	Re-commissioned in 1887.
Richmond E. Case	Jan. 2, 1883..	Jan. 1, 1889..	

SUPERINTENDENTS.

Zelotes Truesdel	Mar. 13, 1874..	June 14, 1875..	Resigned.
Lyman P. Alden	June 21, 1875..	May 9, 1883..	Resigned.
John N. Foster	May 9, 1883..	April 9, 1887..	Resigned.
Wesley Sears	June 20, 1887..		

FIRST BIENNIAL REPORT

OF THE

STATE GAME AND FISH WARDEN

PUBLISHED BY

GILBERT R. OSMUN, Secretary of State.

BY AUTHORITY.

LANSING:
DARIUS D. THORP, STATE PRINTER AND BINDER.
1889.

LETTER OF TRANSMITTAL.

STATE OF MICHIGAN, }
DEPARTMENT OF STATE, }
Lansing, January 10, 1889. }

To the Honorable the Legislature:

In compliance with the provisions of section 6 of act No. 28, of the public acts of 1887, entitled, "An act to provide for the appointment of a Game and Fish Warden and to prescribe his powers and duties," I have the honor to transmit herewith such portions of the monthly reports of the State Game and Fish Warden as are deemed of interest to the public.

Very respectfully,

GILBERT R. OSMUN,
Secretary of State.

REPORT.

OFFICE OF STATE GAME AND FISH WARDEN, {
Grand Rapids, Mich., December 28, 1888. }

To the Secretary of State :

In order that you may comply with that provision of the game warden act which requires you to transmit to the Legislature such portions of the monthly reports of the State Game and Fish Warden as are of public interest, I have prepared and herewith submit a summary of the work of this department since its creation, March 15, 1887, as shown by such monthly reports, together with such other information as the reports suggest and as to me seem proper to be laid before the Legislature.

Immediately upon my appointment, the work of securing a force of deputy wardens was entered upon, and after a few months' careful work the assistance of from one to three deputies in each county, having like powers within their respective counties as myself, was secured. Since that time the list of deputy wardens has been changed by removals and resignations; but nearly every vacancy has been filled by a new appointment and I attach a list of the deputy wardens of each county holding office at this date, together with their respective postoffice addresses. They number 151. In every instance these appointments have been made either after my personal examination of the situation, or upon the petition of reliable residents of the county.

The work of "enforcing the statutes of this State for the protection and propagation of birds, game and fish" was entered upon immediately after my appointment, and as shown by the monthly report filed in the office of the Secretary of State April 27, 1887, there were 35 arrests made for violations of the game and fish laws in the first month of the existence of this department, and several trials were had and convictions obtained before the end of the month. In view of this statement, it is needless to add that prior to the passage of the game warden act, but little attention was paid to the game and fish laws and they were generally disregarded. The sentiment of the people regarding them soon changed when it became generally known that they were to be enforced, and in the place of open and flagrant violations the department had to deal with offenders who covered their violations as far as possible. This clearly demonstrated the necessity of the aid of competent deputy wardens in each county to make complaints and secure evidence sufficient to convict guilty parties; and this in turn showed the need of some provision by which the deputy wardens might be assured of proper remuneration for services performed and expenses necessarily incurred.

The game warden act leaves it to the boards of supervisors of the respective counties to fix the compensation of deputy wardens, and in most of the counties of the State the supervisors have voted a fair compensation and have given their support to the work of the department. The compensation awarded ranges from \$2 per day for time actually spent, to an annual compensation of \$1,000. In other counties (notably Saginaw, St. Clair, Alpena, Macomb and Missaukee), the supervisors have persistently refused to compensate the deputy wardens in any manner. In other counties the compensation awarded is so meager as to be of little value as an incentive to work. For obvious reasons this has rendered it quite impossible properly to enforce these laws in such counties; and this provision regarding the compensation of deputy wardens, or rather a lack of such provision, I regard as one defect in the game warden act which should be remedied. A provision granting the deputy wardens the fees of sheriffs for like services, and leaving it to the supervisors to allow such further compensation as they will, would improve this branch of the law and secure good service by the deputy wardens in counties which now grant no compensation. In this connection I desire also to call attention to the need of at least three State deputies to assist in securing competent county deputies, and proper work on their part, and to do special work in localities where the sentiment is opposed to these laws, and to assist generally in the work of the department. The need of this and other revisions of these laws may be emphasized in the proper time and place.

I have said that during the first month after the creation of this department there were 35 arrests made for violations of the game and fish laws. The trials of many of these parties did not take place until the following month, and the monthly report for May 25, 1887, shows that out of 65 arrests up to that date there were 59 convictions, and the fines and costs imposed and paid amounted to \$344.83. The arrests during the month of June, 1887, numbered 28, the convictions 25, and fines imposed amounted to \$173.78. It seems unnecessary to call attention to each month's report. During the first six months after my appointment, the number of arrests for violations of these laws averaged 39 a month, and in each month nearly all of those arrested were convicted. The average number of arrests during the last nine months has been 24, and the average for the entire twenty-one months that the department has existed is 23.

A monthly report has been required from each Deputy Warden, upon blanks prepared for that purpose, showing all arrests made, the offense charged, the result of trial and the fine and costs imposed. These reports show that from March 15, 1887, when this office was created, to December 15, 1888, there have been 482 arrests made for violations of the game and fish laws. Of that number 398 were convicted, either upon trial or by pleading guilty, while 84 were acquitted, discharged or the cases *nolle prosequi*.

The fines imposed upon conviction vary from \$1 to \$50, and the total fines and costs paid by these offenders aggregate \$5,632.11. In many instances the magistrates released the offenders upon suspended sentences, while 14 of those convicted served short sentences in the county jails in lieu of payment of fines.

The monthly reports show that the offenses charged against these offenders are quite evenly divided between the game and fish laws. The violations of the game laws for which arrests were made number 243, and the violations of

the fish laws number 239. A large proportion of the violations of the game laws have related to deer and quail, while the offenses against the fish laws are about evenly divided between unlawful spearing, the use of unlawful nets and the use of dynamite.

Three cases arising under these laws have been taken to the Supreme Court. In the first (*People vs. Kirsch*) a conviction for illegal fishing was affirmed and the constitutionality of the act under which the complaint was made was declared. In the next case (*In re Moore*) the Supreme Court granted the discharge from custody of a party convicted and imprisoned at Mt. Clemens for fishing in inland waters with a net, contrary to one provision of Section 2, Act No. 265 of 1887, upon the ground that such provision was not covered by the title of the act. No opinion was filed by the judge in this case and there was a general misapprehension as to its extent and meaning. It was generally declared that the entire fish law had been declared void. The department, by circulars and letters and through the medium of the press, corrected this erroneous report of the decision as soon as possible, and the law, with the exception of the one provision referred to, has been enforced as far as possible and violators prosecuted.

The third case appealed to the Supreme Court was that of the *People vs. O'Neil* (39 *N. W. Rep.* 1). The conviction of the respondent for selling quail after the eight days' limit was reversed upon the ground that the quail were purchased in Missouri and that our laws apply only to Michigan game, although not so limited in express words. The constitutionality of the section claimed to be violated was affirmed by the Supreme Court, so far as Michigan game is concerned.

In trials before juries there has been little disposition shown on the part of jurors to acquit accused parties where the evidence has shown them to be violators. There are exceptions in some counties. And invariably the better sentiment of the people is in favor of the enforcement of any law that the Legislature sees fit to put upon the statute books.

It belongs to the State Board of Fish Commissioners to show how large, important and valuable are the fish interests as a food-product of the State. The game interests are equally as important, and as a food-product the game in this State is much more important than is generally known.

Knowing the extent of these interests, it is clear that their preservation depends very largely upon the enforcement of the laws pertaining to them. In order that the people might become familiar with these laws, nearly the entire edition of 10,000 copies of the game and fish compilation has been distributed, under the supervision of this department, throughout the State. In addition to this, the substance of the more important laws has been published in the form of notices of warning, which have been generally posted.

My visits for consultation with the deputy wardens and in the general work of the department have extended to all parts of the State, and I find that ignorance of these laws can rarely be claimed in excuse for their violation, so generally have they been published and circulated. And I have observed an increasing interest on the part of citizens generally in seeing them enforced and offenders of them punished.

Respectfully,

WM. ALDEN SMITH, *Warden.*

WARDEN AND DEPUTIES.

CORRECTED LIST, DECEMBER 28, 1888.

WILLIAM ALDEN SMITH, STATE GAME AND FISH WARDEN, GRAND RAPIDS.

DEPUTIES.

Alcona county—Charles Foley, West Harrisville; O. H. Smith, Harrisville.
Alger county—George Terrio, Au Train.
Allegan county—N. G. Davis, Otsego; Edwy C. Reid, Allegan.
Alpena county—Eugene H. Furbush, Alpena; W. E. Kurtz, Alpena,
Antrim county—Alexander Campbell, Elk Rapids; Frank M. Severence, East Jordan,
J. A. Carey, Central Lake.
Arenac county—Bernard F. Baurasso, Worth P. O.; George N. Schillinger, Standish.
Baraga county—N. S. Pennock, Baraga.
Barry county—Edwin O. Hyde, Morgan; Oliver England, Orangeville Mills.
Bay county—Frank Shawl, Bay City.
Benzie county—Morris Case, Homestead; Peter Mick, Frankfort.
Berrien county—John N. Glavin, New Buffalo; Benjamin Earle, Niles; Edward
Paynes, St. Joseph.
Branch county—D. W. Post, Bronson; Abel Coon, Quincy.
Calhoun county—Frank H. Wherry, Marshall; Robert B. Weir, Battle Creek.
Cass county—Robert Lundy, Marcellus; E. Barlow Jewell, Dowagiac; A. J. Cooper,
Redfield.
Charlevoix county—Willard A. Smith, Charlevoix.
Chippewa county—Samuel Butterfield, Detour; Peter M. Moore, Sault Ste. Marie.
Clare county—Joseph N. Brown, Farwell; William Ross, Clare.
Clinton county—A. J. Moss, Maple Rapids; L. H. Allen, Shepardsville.
Crawford county—J. S. Cugo, Wellington; Thomas Wakeley, Grayling; Elijah Flagg,
Frederic.
Delta county—Charles J. Stratton, Escanaba.
Eaton county—George W. Sherwood, Charlotte; Carlisle Holmes, Grand Ledge; C. A.
Collar, Eaton Rapids.
Emmet county—J. D. Rawden, Carp Lake.
Genesee county—Sampson Hatt, Argentine; Charles Hewitt, Flint.
Gladwin county—Chas. W. Van Valkenberg, Gladwin; F. L. Prindle, Gladwin.
Gogebic county—E. V. Conley, Watersmeet.
Grand Traverse county—J. W. Thomas, Traverse City; C. E. Brewster, Lake
Brewster.
Gratiot county—Andrew S. McIntyre, St. Louis.
Hillsdale county—Russell Converse, Hillsdale.
Houghton county—James N. Cox, Calumet; Edward F. Douglass, Houghton.
Huron county—George F. Wetsell, Sand Beach.
Ingham county—W. H. McKale, Lansing.
Ionia county—Mark Rodman, Ionia; William Hutchinson, Portland; Lewis C.
Walker, Saranac.
Iosco county—Charles R. Henry, Au Sable; John Sims, Jr., East Tawas.
Iron county—Elisha Morgan, Stambaugh.
Isabella county—Samuel Craft, Mt. Pleasant.
Jackson county—Richmond W. French, Brooklyn; Amaziah J. Derby, Jackson.
Kalamazoo county—Wm. A. Glover, Kalamazoo.
Kalkaska county—Jerry Knis, Kalkaska; Wm. F. Hubbard, Kalkaska; Wm. J. Getty,
Kalkaska.

- Kent county—C. B. Corbin, Lowell; Chester S. Ford, Cedar Springs; George H. Miller, City.
- Keweenaw county—Ed. S. Walters, Copper Harbor; Wm. Chapman, Phoenix; George Mayo, Eagle River.
- Lake county—John Baldwin, Baldwin; Bert Lincoln, Luther.
- Lapeer county—A. W. Carey, Lapeer; Bliss H. Darby, Almont.
- Leelanaw county—Barton B. Ellis, Leelanaw.
- Lenawee county—Myron J. Pierce, Adrian; J. B. Allen, Devil's Lake.
- Livingston county—Chas. C. Butler, Hamburg; B. T. O. Clark, Brighton.
- Luce county—J. K. Anderson, McMillan; W. H. Kaye, Newberry.
- Mackinac county—Patrick McCann, St. Ignace.
- Macomb county—Howard Weeks, Mt. Clemens; Andrew G. Wintermute, Romeo.
- Manistee county—Levi Townsend, Manistee; P. W. Niskern, Manistee.
- Manitou county—Frederick Butts, Beaver Island.
- Marquette county—Jacob Dolf, Marquette.
- Mason county—Chas. O. Holmes, Batchellor; Orin Percival, Free Soil; George Cogswell, Ludington.
- Mecosta county—Gerge W. Reed, Stanton; A. R. Streeter, Mecosta.
- Menominee county—James Moriarty, Iron Mountain; S. E. Baker, Menominee; E. N. Kraemer, Waucedah.
- Midland county—Henry Hubbard, Edenville; Joseph C. Townsend, Midland; James Calvary, Midland.
- Missaukee county—Frank Downing, Manton; Washington Reeder, Lake City.
- Monroe county—R. R. Kirby, Petersburg; J. C. Potter, Erie.
- Montcalm county—Augustus T. Call, Lakeview.
- Montmorency county—Allen Briley, Vienna; Herman Besser, Hillman; W. Lawrence Leach, Atlanta.
- Muskegon county—Porter A. Fuller, Muskegon; C. E. Coon, Casnovia.
- Newaygo county—Matthew Geinst, Fremont; Edwin O. Shaw, Newaygo.
- Oakland county—Geo. W. Stephens, Milford; Chas. F. Beebe, Orion; Wm. Van Buskirk, Pontiac.
- Oceana county—Wm. A. Rounds, Pentwater; John Kidder, Hart.
- Ogemaw county—Albert Seaman, West Branch; Hiram Hodge, Churchill.
- Ontonagon county—Ira B. Strong, Watersmeet.
- Osceola county—Burton Halladay, Ashton.
- Oscoda county—Robert Madden, Fairview.
- Otsego county—Otis H. Carpenter, Gaylord.
- Ottawa county—Chas. L. Moody, Jenisonville; Thos. Hammond, Spring Lake.
- Presque Isle county—John Kauffman, Presque Isle; Charles Case, Ocqueoc; Christian Klee, Rogers City.
- Roscommon county—Silas B. Conklin, Prudenville; Warren D. Franklin, Roscommon; Chas. L. De Walle, St. Helen.
- Saginaw county—
- Sanilac county—
- Schoolcraft county—Robert C. McKesson, Manistique.
- Shiawassee county—
- St. Clair county—C. C. Smith, Algonac; Frank DeLand, Memphis.
- St. Joseph county—J. C. Bennett, Sturgis; Chas. Rice, Three Rivers; E. L. Benham, Klinger Lake.
- Tuscola county—John A. McPherson, Caro; A. B. Merritt, Wisner.
- Van Buren county—E. S. Harvey, Bangor; C. F. Day, Lawton.
- Washtenaw county—S. A. Ferguson, Ypsilanti; Jasper Imus, Ann Arbor; Arthur K. Rouse, Saline.
- Wayne county—John Parker, Junction Ave., West Detroit; John W. Jardine, Rockwood; Richard Poole, 268 Randolph St., Detroit.
- Wexford county—John H. Wheeler, Sherman; Harry S. Huson, Manton.

STATE BOARD OF FISH COMMISSIONERS.

- J. C. Parker, President, Grand Rapids.
- John H. Bissell, Detroit.
- Herschel Whittaker, Detroit.
- George D. Mussey, Secretary, Detroit.
- W. D. Marks, Sup't of Fisheries, Paris.

BIENNIAL REPORT
OF THE
BOARD OF CONTROL
OF THE
REFORM SCHOOL
OF
MICHIGAN.

1888

BY AUTHORITY.

LANSING:
THORP & GODFREY, STATE PRINTERS AND BINDERS.
1888.

BOARD OF CONTROL.

H. B. ROWLSON, Hillsdale,	-	-	-	-	-	-	CHAIRMAN.
W. DONOVAN, Lansing,	-	-	-	-	-	-	TREASURER.
WILLIAM BALL, Hamburg,	-	-	-	-	-	-	CLERK.

REPORT OF THE BOARD OF CONTROL

HON. CYRUS G. LUCE, *Governor of the State of Michigan.*

SIR,—The Board of Control of the State Reform School takes great pleasure in submitting, herewith, in accordance with provisions of law, its biennial report for the fiscal years, 1886-7 and 1887-8.

It regards the two years just passed as among the most satisfactory years in the history of the institution. And while calling your attention, as to details, to the superintendent's and other reports herewith submitted, this Board takes pleasure in acknowledging the faithfulness and ability of the superintendent in administering wisely and economically, the important trusts his office impose. It is also pleased to acknowledge the faithfulness of the employés, to the several trusts reposed in them, and to report to you their very hearty interest in all departments of the work.

The Legislature of 1887 appropriated, aside from the amount needed for current expenses and repairs, the sum of \$7,500 for the construction of a permanent sewer and proper sanitary connection therewith, and the Board is pleased to report its construction and the satisfactory working of the same.

The steam pipe tunnel, for which a special appropriation of one thousand dollars was made, is completed. This tunnel is five hundred and fifty feet long, eight feet wide, and five feet high, and connects the engine room with the main buildings. Heretofore the steam pipes were laid in the ground, which necessitated loss of steam by evaporation and condensation, and a consequent increase in the consumption of fuel. The unskilled labor in both these improvements has been entirely furnished by the boys of the institution, and it is safe to add that the value of their labor alone, is at least eight thousand dollars.

For the department of technology the school received a special appropriation of five thousand dollars. It is the desire of the board to introduce trade teaching to a limited extent. A printing office has been established and fully equipped, and fifty boys are daily receiving instruction in the art of printing. The introduction of blacksmithing and carpentry has been delayed, principally on account of the large number of boys used in excavating and other work, and also on account of being unable to find suitable persons to give instruction in the theory and practice pertaining to these trades. These departments will, however, be soon equipped and opened to the instruction of our boys.

The special appropriation of five hundred dollars for ice house and cooling room for the care of meats used at the institution has provided the school with proper accommodation in this respect.

The farm has been utilized to good advantage, and that class of boys have been at work who are best fitted for life on the farm. The two years just closed have been as all know unprofitable to farmers, yet we are pleased with the financial results obtained from the farm.

This report shows the sale of eighty acres of land lying about one mile east of the school grounds on Michigan avenue. Its distance from the school rendered it of little value to the school for any purpose. It was sold for \$5,000 and the money used in buying land contiguous to the school grounds. With this money the Board purchased five acres of land on the northwest corner of the grounds, on which is a substantial brick cottage now occupied by the assistant superintendent. It also purchased four and one-half acres of land on the south side of the grounds, and added eighty-two acres to the north and east sides of the farm property, making ninety-one and a half acres in all. The Board deems this land transaction especially worthy of mention as it considers it has added more than ten thousand dollars in value to the school property, for the price of the eighty acres sold as above mentioned. Our grounds are now ample for the needs of the institution.

The interest earned on account of funds deposited in bank, as will be seen by treasurer's report herewith submitted, is \$578.64 for the two years ending June 30, 1888.

The introduction of blacksmithing, carpentry and printing will necessarily reduce our income, as these trades will be wholly unremunerative to the institution though of incalculable benefit to the boy. It is expected, therefore, that revenue from boys' labor will decrease during the next two years.

The items of current expense needed during the next two years are as follows:

For general salaries.....	\$12,780 00
Teachers' salaries.....	3,700 00
Medical expenses.....	840 00
Clothing and shoes.....	6,240 00
Provisions.....	15,360 00
Fuel.....	4,500 00
Lights.....	1,700 00
Water supply.....	675 00
Engine room and boiler house.....	1,540 00
Laundry.....	728 00
Crockery and cooking utensils.....	600 00
Renewing furniture.....	480 00
Bedding.....	960 00
Repairs on buildings.....	1,500 00
Library and current literature.....	480 00
School books and supplies.....	317 00
Printing, stationery and office books.....	120 00
Postage.....	240 00
Live stock.....	400 00
Farm and garden.....	1,500 00
Wagons, harness and repairs.....	240 00
Freight, drayage and express.....	200 00
Painting, papering, etc.....	500 00
Hay and grain.....	600 00

REPORT OF THE BOARD OF CONTROL.

7

Discharged inmates	\$1,400 00
Miscellaneous	1,400 00
Total	\$59,000 00
Less estimated earnings and sundry receipts	6,000 00
	\$53,000 00
For special expenses as follows:	
New laundry and dry room	\$250 00
Root cellar	500 00
Maintenance Department of Technology	1,500 00
Laying out and grading grounds, construction of sidewalks, paving of gutter line on Pennsylvania avenue, and fence building	6,000 00
Total	\$8,250 00

In reference to these special needs it is proper to explain that the item of \$6,000 is rendered necessary by the recent grading of Pennsylvania Avenue upon which our grounds front. The State has never been to any expense either for grading the grounds of the Reform School or for building walks in front of our premises. Now that the street has been graded it is desirable that a substantial walk be laid and that the grounds be brought to grade, and provided with such drives and walks as are appropriate and necessary. A careful estimate of the cost of these improvements shows that it will be at least \$8,500, but we think that the work of our teams and boys may be utilized to the extent of saving \$2,500 of this amount. We are confident that your Excellency and the Legislature will agree with us that it is wise economy to make this improvement at once and in a substantial manner, rather than to have the work running along through a term of years. In fact the different portions of the work are so interdependent that it would be practically impossible to do one part properly without carrying all the parts along at the same pace.

The amount suggested as necessary for the support of the Department of Technology is intended to cover the material used in giving instruction and to pay for salaries of instructors.

The dry room connected with our laundry is worn out and a new one is needed. The material for this will cost about \$250.

The school has no root cellar and needs one sadly. The skilled labor and material necessary for this will cost \$500.

In the report of the Board for the year 1880 the following reference to the condition of the main building was made.

“ We desire to call attention to the condition of the main building. It was poorly built and is in a generally dilapidated condition, and it is questionable whether any large amount should be expended upon it for repairs. During the past year the settling of the foundation walls and spreading of the main walls of the building caused so much apprehension that the Board secured the services of competent building experts to examine their condition and recommend what course should be pursued. In accordance with their suggestions the walls were thoroughly anchored to prevent further spreading,

and embankments made around the foundations to protect them from damage by water and frost. We trust the Legislature will examine the building for themselves, and decide as to what amount of further repairing would be justifiable."

A year later there seemed to be special occasion for alarm in reference to a portion of the building, and at the request of the Board the Governor of the State ordered an examination and report on its condition by an expert. Hon. Alexander Chapoton of Detroit, made the examination and reported that the "North Wing" was in a dangerous condition and should not be longer occupied, and that the center of the main building was in nearly as bad a condition as the "North Wing." On the strength of this report the Legislature at its special session in 1882, made provision for rebuilding the North Wing. We desire to renew the suggestion of this Board made in 1880, enforced by the report of Mr. Chapoton in 1881, and to have the Legislature assume all the responsibility connected with the continued use of a building so emphatically condemned by eminent authority years ago.

The lively interest which your Excellency has taken in the work of the Reform School, and the many expressions of approval you have made in reference to the management of the important trusts confided to our care, are appreciated by this Board.

Respectfully submitted,

H. B. ROWLSON,
WILLIAM BALL,
WILLIAM DONOVAN.

Lansing, June 30, 1883.

SUPERINTENDENT'S REPORT.

To the Board of Control of the Reform School:

GENTLEMEN:—I have the honor to submit my report as Superintendent of the Reform School for the biennial period ending June 30, 1888.

During the past two years there has been but few changes in the *personnel* of our corps of employés. In this particular we are exceptionally fortunate, as every year of successful work in an institution adds largely to the value of one's effort in behalf of those for whose good we labor. I am happy to make mention of the faithfulness and integrity of purpose which have characterized those who have been my helpers in our school since our last report, and to give to them a large share of the credit that is accorded to the good work we are accomplishing.

The statistical tables accompanying this report give the usual items of interest concerning our work and our inmates.

It is gratifying to note that during the past year we have been able to release 239, a larger number by 21 than any previous year. We have been materially aided in this work by the active and intelligent efforts of several of the County Agents of the State Board of Corrections and Charities, who have rendered valuable aid not only in finding homes for the homeless, but also in no less important labor of watching over those who were "out on leave of absence."

The great majority of juvenile delinquents are made such through a lack of good home influences. In assisting to improve the home influences surrounding wayward boys and girls, and in encouraging such to do right despite their unfortunate surroundings, is found, as it appears to us, the most important work of the County Agent. Were all these officers as efficient in this direction as a few who might be mentioned, the number of commitments to this institution would be materially lessened.

In our report two years ago we expressed the hope that the Legislature would make provision for the teaching of trades in our school, that we might thereby return to society those committed to our care with an adequate preparation for successfully grappling with the bread-and-butter phase of the problem of life. We were not disappointed in our belief that the Legislature would make a reasonable appropriation for this new feature of our work, and are sure the incoming Legislature will be pleased with what we have accomplished in this direction.

Our printing office is doing most excellent trade-teaching work for fifty boys, and we have already placed in some of the best offices in the State, boys

who by their aptitude in the work, are a constant proof of the wisdom of this new departure.

Plans for teaching other trades are well matured and will be put into execution at an early date.

In several States the law provides that boys, who, while inmates of the Reform School, prove thoroughly incorrigible, may be transferred to a penal institution for adults, to remain during their term of commitment to the Reform School, or such shorter period as may seem wise. I would suggest the propriety of such a provision in our own State, to be applied in the case of occasional determined incorrigibles, who do not prove amenable to the ordinary and reasonable discipline of an institution like ours, and who are a continual menace to the welfare of the great majority of our inmates.

We are under renewed obligations to ex-Governor Alger, for kindly and generously remembering us by the gift of a pair of skates to each boy on Christmas, 1886, and by a cash present sufficient to buy each boy a pair of nice mittens on Christmas 1887. Such generosity certainly "blesseth him that gives, and him that takes."

The frequent calls of His Excellency, Governor Luce to the school have attested his deep interest in our work, and his earnest words of encouragement and paternal advice have been a constant inspiration to our boys.

We are happy to extend the thanks of the School to the publishers of the periodicals named below, for their thoughtful kindness in supplying the tables of our reading-room with their publications:

Albion Recorder, Alpena Pioneer, Appleton's Literary Bulletin, Bay City Weekly Tribune, Coldwater Republican, Charlevoix Journal, City and Country, Church Helper, Cheboygan Tribune, American Exchange Mart, Howard Times, Hillsdale Standard, Grange Visitor, Ingham County Democrat, Kalamazoo Telegraph, Lyman School Enterprise, Lansing Journal, Ludington Record, Saginaw Morning Herald, Milford Times, Ohio Industrial School Journal, Owosso Weekly Press, Rockford Register, State Republican, Summary, School Moderator, Temperance, Village Echo.

With grateful appreciation of the considerate kindness which I have received from you, gentlemen of the Board, this report is

Respectfully submitted,

C. A. GOWER,

Superintendent.

Lansing, June 30, 1888

STATISTIOAL TABLES.

[In examining these tables or the Treasurer's Report, remember that the fiscal year 1886-7 consisted of only nine months.]

TABLE I.

	Number committed since opening.	Number in School Sept. 30, 1886.	1886-7.		1887-8.		Number in School June 30, 1888.
			Admitted.	Released.	Admitted.	Released.	
White boys.....	8,647	410	145	128	202	220	409
Colored boys.....	200	28	7	9	19	19	28
Girls.....	8						
Indians.....	7						
Totals.....	8,981	488	152	137	221	239	485

TABLE II.

Counties from which Boys have been Received.

Counties.	1886-7.	1887-8.	Previous years.	Total.
Alger.....		1		1
Alcona.....			3	3
Allegan.....	1		33	34
Alpena.....			16	16
Antrim.....			5	5
Baraga.....				
Barry.....		1	24	25
Bay.....	16	18	125	154
Benzie.....			3	3
Berrien.....		1	50	51
Branch.....		3	81	84
Calhoun.....	6	7	156	169
Cass.....	2	1	32	35
Charlevoix.....			1	1
Cheboygan.....	1		3	4
Chippewa.....			1	1
Clare.....				
Clinton.....		1	43	44
Crawford.....			2	2
Delta.....		1	2	3
Eaton.....	4	7	80	91
Emmet.....		2	13	15
Genesee.....	4	6	114	124
Gladwin.....			1	1

TABLE II.—CONTINUED.

Counties.	1886-7.	1887-8.	Previous years.	Total.
Grand Traverse.....			3	3
Gratiot.....	2	2	23	27
Hillsdale.....	5	3	62	70
Houghton.....	1	1	10	12
Huron.....			2	2
Ingham.....	5	10	126	141
Ionla.....	1	5	61	67
Iosco.....		2	6	8
Isabella.....	1		13	14
Isle Royal.....				
Jackson.....		5	155	160
Kalamazoo.....		6	129	135
Kalkaska.....	2		1	3
Kent.....	11	11	171	193
Keweenaw.....			1	1
Lake.....			2	2
Lapeer.....	2	3	50	55
Leelanaw.....				
Lenawee.....	1	6	136	143
Livingston.....			29	29
Luce.....		1		1
Mackinac.....	1		1	2
Macomb.....		1	44	45
Manistee.....	5	4	19	28
Manitou.....				
Marquette.....	2	6	26	34
Mason.....	1	2	9	12
Mecosta.....	5	6	23	34
Menominee.....		4	10	14
Midland.....	1		9	10
Missaukee.....		1		1
Monroe.....		4	37	41
Montcalm.....	2	1	26	29
Montmorency.....				
Muskegon.....		4	51	55
Newaygo.....		1	12	13
Oakland.....	8		96	99
Oceana.....	1		5	6
Ogemaw.....			1	1
Ontonagon.....				
Osceola.....	1	1	8	10
Oscoda.....				
Otsego.....			2	2
Ottawa.....	3	1	53	57
Presque Isle.....				
Roscommon.....				
Saginaw.....	12	16	137	165
Sanilac.....			10	10
Schoolcraft.....			1	1
Shiawassee.....	2	2	48	52
St. Clair.....	3	5	74	82
St. Joseph.....	1	2	51	54
Tuscola.....	1	5	13	19
Van Buren.....	1	2	31	34
Washtenaw.....	3	4	141	148
Wayne.....	87	47	847	981
Wexford.....	2	3	5	10
Totals.....	152	221	3,558	3,931

TABLE III.
Nativity of Boys.

United States.					Foreign Countries.				
	1886-7.	1887-8.	Previous Years.	Total.		1886-7.	1887-8.	Previous Years.	Total.
Michigan	97	151	1,966	2,214	Canada	17	18	418	451
New York	9	9	894	412	England	2	1	43	46
Pennsylvania	1	2	45	48	Ireland		2	77	79
Virginia			12	12	Germany	2	6	91	99
Tennessee			3	3	Holland	2		16	20
Indiana	4	3	81	88	Scotland			7	7
Illinois		2	55	57	Prussia			4	4
Massachusetts	2		38	40	Jersey Isles			1	1
Missouri			10	10	France			6	6
Ohio	7	8	134	149	On the Ocean			1	1
Connecticut			10	10	South America			1	1
Maine		1	5	6	Switzerland			3	3
New Jersey			8	8	West Indies			1	1
Wisconsin	2		27	29	Sweden		1	5	6
Kentucky			16	16	Hungary			1	1
Arkansas		1	3	4	Austria			1	1
Vermont			11	11	Unknown	3	6	19	28
Louisiana			4	4	Poland	3		5	8
Rhode Island			3	3	Italy			1	1
District Columbia			2	2	Mexico			1	1
Iowa		2	6	8	New Brunswick		1		1
Alabama			2	2	Norway		2		2
California		2	1	3					
North Carolina			1	1					
New Hampshire			2	2					
Texas			1	1					
South Carolina			2	2					
Maryland			2	2					
Delaware			2	2					
Minnesota		2	2	4					
Florida		1	1	1					
Kansas	1		3	4					
Georgia			2	2					
					Total	152	221	3,558	3,931

TABLE IV.
Nativity of Boys' Fathers.

	1886-7.	1887-8.	Previous Years.	Total.		1886-7.	1887-8.	Previous Years.	Total.
America	57	62	1,457	1,576	Chili		1		1
Ireland	13	9	631	653	Switzerland			3	3
England	6	11	154	171	Belgium			3	3
France	1	3	52	56	West Indies	1		2	3
Canada	17	20	312	349	Sweden		2	4	6
Germany	7	13	311	331	Hungary			4	4
Holland	4	3	29	36	Bohemia			1	1
Scotland	2	1	37	40	Denmark			4	4
Prussia			6	6	Poland	3	2	9	4
Africa			16	16	Austria			2	2
Russia			1	1	New Brunswick			1	1
Norway		1	1	2	Unknown	41	92	509	642
Wales			3	3	Italy			1	1
Total						152	221	3,558	3,931

TABLE V.

Cause of Commitments.

	1886-7.	1887-8.	Previous Years.	Total.
Larceny.....	54	90	2,412	- 2,556
Grand larceny.....		2	65	67
Burglary.....	1	1	84	86
Burglary and larceny.....			60	60
Assault and battery.....	11	5	208	224
Assault.....		3		3
Attempt to murder.....			3	3
Vagrancy and disorderly.....	7	7	358	372
Malicious trespass.....		2	68	70
Arson.....	2		21	23
Rape.....	1		4	5
Boarding railroad trains.....		1		1
Prostitution.....			7	7
False pretenses.....	1		9	10
Careless use of firearms.....			2	2
Compound larceny.....			2	2
Manslaughter.....			4	4
Horse stealing.....			5	5
Forgery.....	1	2	2	5
House breaking.....			1	1
Defacing buildings.....			2	2
Breaking locks.....			1	1
Disorderly.....		2		2
Truancy and disorderly.....	50	50	115	224
Returned.....	14	26	117	157
Drunkenness.....	1	1	5	7
Robbing U. S. mail.....			2	2
Placing obstruction on R. R.....			1	1
Juvenile disorderly.....		20		20
Total.....	152	221	3,558	3,931

TABLE VI.

Courts by which Commitments were Made.

	1886-7.	1887-8.	Previous Years.	Total.
Justice of the peace.....	92	182	2,279	2,553
Police justices.....	5	20	477	502
Police judges.....	17	7	67	91
Circuit courts.....	4	6	400	410
Recorder's courts.....	20	28	197	245
Superior courts.....		2	5	7
Returned.....	14	26	123	163
Committed by Governor.....			1	1
Total.....	152	221	3,558	3,931

TABLE VII.

Average Number of Months Boys have remained in the Institution.

Years.	Months.	Years.	Months.
1860-1.....	28½	1874-5.....	30
1861-2.....	32½	1875-6.....	31½
1862-3.....	31	1876-7.....	25½
1863-4.....	28½	1877-8.....	29
1864-5.....	22	1878-9.....	31½
1865-6.....	27	1879-80.....	28½
1866-7.....	20	1880-1.....	24
1867-8.....	30½	1881-2.....	19½
1868-9.....	32½	1882-3.....	21
1869-70.....	30½	1883-4.....	23
1870-1.....	32½	1884-5.....	22
1871-2.....	32½	1885-6.....	23
1872-3.....	30	1886-7.....	23
1873-4.....	27½	1887-8.....	26

TABLE VIII.

Disposition of Boys Released.

	1886-7.	1887-8.
Number discharged.....	52	86
Number granted leave of absence.....	80	148
Number escaped.....	1	1
Number died.....	1	2
Returned to county.....	4	2
Total.....	137	239

TABLE IX.

Number Employed in Different Departments at close of Fiscal Year.

	1886-7.	1887-8
Cane shop.....	240	164
Tailoring.....	48	50
Shoemaking.....	6	6
Kitchen.....	12	14
Printing office.....		48
Dining room.....	13	14
House work.....	35	36
Laundry.....	6	6
Office boys.....	2	2
Hospital boy.....	2	2
Engine room.....	6	6
Bake shop.....	8	8
Farming.....	80	81
Total.....	453	435

TABLE X.

Age of Boys Committed.

	1886-7.	1887-8.	Previous Years.	Total.
Seven years old.....			7	7
Eight years old.....			7	7
Nine years old.....			25	25
Ten years old.....	8	16	288	307
Eleven years old.....	26	23	411	459
Twelve years old.....	18	23	559	595
Thirteen years old.....	29	47	549	625
Fourteen years old.....	28	46	651	725
Fifteen years old.....	44	56	882	982
Sixteen years old.....	2	7	210	219
Seventeen years old.....	3	4	7	13
Eighteen years old.....			3	3
Nineteen years old.....			1	1
Twenty years old.....			3	3
Total.....	152	221	3,558	3,981

TABLE XI.

Number Received, by Months and Years.

	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total for each Year.
1866-7.....	1	2	3	6	8	3	5	1	6	9	5	5	54
1867-8.....	6			1		5	8		2		5	2	24
1868-9.....	5	11	2	2	3	6	6	11	4	2	2	8	62
1869-70.....	4		11	5	7	5	7	3	4	6	7	2	61
1870-1.....	1	7	4	2	6	10	1	8	7	4	4	9	63
1871-2.....	6	5	6	4	8	4	7	10	8	13		6	72
1872-3.....	5	5	4	6	6	3	8	4	8	4	6	12	71
1873-4.....	7	4	7	8	14	13	13	14	10	11	4	7	113
1874-5.....	4	2	10	1	15	17	2	14	8	8	3	12	95
1875-6.....	10	3	8	9	8	4	20	20	7	6	8	7	110
1876-7.....	11	5	15	7	8	5	12	11	10	8	15	7	109
1877-8.....	4	10	6	11	10	10	12	9	9	7	5	6	99
1878-9.....	9	13	11	9	13	11	3	9	12	9	7	9	115
1879-80.....	5	13	13	4	4	6	7	9	4	9	7	9	90
1880-1.....	3	7	4	7	5	7	11	8	10		1	10	73
1881-2.....	6	11	2	8	8	7	6	15	9	6	7	7	92
1882-3.....	4	4	11	12	12	12	10	8	8	6	6	8	101
1883-4.....	6	4	4	8	8	12	17	14	16	6	4	10	109
1884-5.....	2	9	6	9	4	6	8	7	5	8	6	15	85
1885-6.....	7	10	7	13	9	7	13	7	14	3	8	7	110
1886-7.....	8	7	12	8	7	11	9	13	16	11	6	15	123
1887-8.....	7	17	15	13	13	16	16	11	9	23	13	13	166
1888-9.....	6	8	8	10	12	18	18	17	16	9	8	14	139
1889-90.....	20	10	20	13	18	13	19	10	20	18	8	8	177
1890-1.....	8	7	13	18	11	11	10	24	16	11	18	11	158
1891-2.....	18	17	24	11	17	14	30	20	13	26	14	30	234
1892-3.....	10	11	13	8	14	27	20	22	24	13	14	15	191
1893-4.....	15	10	30	21	20	20	23	11	21	23	20	20	234
1894-5.....	20	10	16	17	16	15	11	21	15	18	22	18	199
1895-6.....	17	24	9	14	14	20	15	17	20	26	23	31	250
1896-7.....	17	9	20	12	25	26				15	12	16	152
1897-8.....	12	18	18	27	21	18	18	17	15	19	23	15	221
Total.....	264	273	332	304	338	362	355	355	346	337	291	364	3,981

TABLE XII.

Number Released, by Months and Years.

	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total for each Year.
1856-7.....	3	1	2	2	2	1	-----	1	1	2	1	2	18
1857-8.....	1	-----	-----	1	-----	-----	1	1	-----	1	-----	-----	5
1858-9.....	2	-----	2	-----	3	4	2	1	2	2	2	4	24
1859-60.....	1	6	-----	1	1	4	1	1	1	-----	3	1	20
1860-1.....	-----	6	8	6	-----	12	-----	9	2	4	13	-----	55
1861-2.....	3	2	7	1	7	-----	5	7	1	-----	1	-----	34
1862-3.....	5	9	6	5	-----	1	1	5	4	16	4	12	63
1863-4.....	6	9	4	2	4	6	10	18	11	5	1	15	86
1864-5.....	4	3	4	6	4	5	5	4	3	7	8	-----	53
1865-6.....	10	6	9	4	18	1	12	1	17	6	9	5	98
1866-7.....	13	4	16	13	9	7	11	9	18	10	5	5	120
1867-8.....	4	11	13	8	11	13	11	6	11	2	13	6	109
1868-9.....	3	2	3	9	1	13	11	11	13	6	10	1	83
1869-70.....	12	7	10	6	10	10	11	8	3	11	9	8	105
1870-1.....	6	15	15	14	11	6	13	2	7	-----	6	2	97
1871-2.....	10	5	8	14	16	12	10	5	2	10	14	3	109
1872-3.....	5	6	6	6	14	11	4	11	2	14	14	4	97
1873-4.....	7	6	4	5	8	4	13	10	8	14	4	5	88
1874-5.....	10	3	6	21	9	12	15	9	9	7	4	3	108
1875-6.....	4	8	11	8	5	12	7	10	5	10	2	6	88
1876-7.....	10	12	5	13	9	10	7	12	7	8	4	6	103
1877-8.....	9	7	9	14	7	10	16	7	3	9	6	4	101
1878-9.....	8	7	10	20	24	11	16	20	17	9	8	9	159
1879-80.....	10	12	15	19	11	19	18	15	10	4	23	12	163
1880-1.....	9	13	21	20	16	7	12	15	17	9	9	16	165
1881-2.....	10	5	12	17	22	11	10	16	13	22	16	27	181
1882-3.....	9	10	31	25	30	14	14	11	20	17	8	13	202
1883-4.....	3	9	12	18	12	16	12	7	34	12	5	5	145
1884-5.....	12	7	26	40	19	24	20	17	10	16	16	10	217
1885-6.....	8	7	30	39	17	16	23	18	17	21	7	11	214
1886-7.....	5	8	33	23	22	15	-----	-----	-----	13	6	13	137
1887-8.....	9	13	18	36	30	22	25	30	17	17	9	13	239
Total.....	202	253	337	368	339	309	316	305	333	297	221	236	3,496

REPORT OF THE TREASURER

OF THE REFORM SCHOOL FOR THE TWO YEARS ENDING JUNE 30, 1888.

Reform School in Account with W. Donovan, Treasurer, for year ending June 30, 1887.

Account of Special Appropriations.	Debits.		Credits.		
	Disbursements.	Balances, June 30, '87.	Totals.	Balances, Sept. 30, '88.	From State Treasurer.
Sidewalks and fences.....		\$250 00			\$250 00
Steam-pipe tunnel.....		1,000 00			1,000 00
Sewerage system.....		2,000 00			2,000 00
Kitchen furniture.....		200 00			200 00
Laundry machinery.....		500 00			500 00
Ice house and meat room.....		500 00			500 00
Totals		\$4,450 00			\$4,450 00

Reform School in Account with W. Donovan, Treasurer, for year ending June 30, 1888.

Account of Special Appropriations.	Debits.			Credits.		
	Disbursements.	Balances, June 30, '88.	Totals.	Balances, June 30, '87.	From State Treasurer.	From Other Sources.
Sidewalks and fences.....	\$370 00	\$230 00	\$500 00	\$250 00	\$250 00	
Steam-pipe tunnel.....	1,000 00		1,000 00	1,000 00		
Sewerage system.....	7,500 00		7,500 00	2,000 00	5,500 00	
Kitchen furniture.....	125 00	75 00	200 00	200 00		
Laundry machinery.....	500 00		500 00	500 00		
Ice-house and meat room.....	500 00		500 00	500 00		
Department of technology.....	1,849 54	3,183 70	5,033 24		5,000 00	\$33 24
Totals	\$11,744 54	\$3,488 70	\$15,233 24	\$4,450 00	\$10,750 00	\$33 24

Analysis of Cash Receipts and Disbursements through Current Expense Account.

Classification.	Fiscal Year 1886-7.		Fiscal Year 1887-8.	
	Disbursements.	Receipts.	Disbursements.	Receipts.
General salaries.....	\$9,694 48	-----	\$18,748 87	
School salaries.....	2,629 82	-----	8,631 91	
Painting and papering.....	371 21	-----	458 11	
Discharged inmates.....	623 58	-----	1,410 98	
Library.....	140 09	-----	451 79	
Printing and stationery.....	74 45	-----	114 31	
Postage.....	77 20	-----	161 40	
Fuel.....	4,946 16	-----	4,548 05	
Lights.....	1,723 41	-----	1,625 86	
General expenses.....	999 89	\$180 13	1,458 51	\$715 06
School expenses.....	189 73	-----	345 70	
Hospital.....	585 82	-----	1,004 12	
Repairs and alterations.....	1,002 78	-----	1,633 45	
Visitors.....		128 75		223 30
Clothing and shoes.....	1,879 94	-----	5,918 89	
Bedding.....	592 78	-----	807 14	
Furniture.....	115 48	-----	618 19	
Provisions.....	10,877 07	-----	15,776 96	
Farm account.....	1,395 56	673 09	1,975 50	883 62
Farm implements, wagons, harnesses, etc.....	161 70	-----	102 64	
Chair work.....	7,269 48	11,436 63	8,725 00	12,835 59
Pennsylvania Ave. grade.....			729 29	
Land.....	2,500 00	5,000 00	6,685 00	1,700 00
School furniture.....	20 00			
Interest.....	9 89	156 06	9 66	412 64
Laundry.....	88 96	-----	647 53	
Freight, drayage, etc.....	97 90	-----	197 77	
Hay and grain.....	485 71	-----	686 67	
Crockery, etc.....	283 59	-----	828 51	
Heating apparatus.....	833 85	-----	1,536 22	
Water supply.....	393 75	-----	787 50	
Total.....	\$49,506 75	\$17,524 68	\$76,074 53	\$16,299 21
Receipts from State Treasurer.....		26,000 00		52,000 00
Balance commencing fiscal year.....		13,839 41		7,857 84
Balance close fiscal year.....	7,857 84		52 02	
Total.....	\$57,364 09	\$57,364 09	\$76,126 55	\$76,126 55

State of Michigan in Account with W. Donovan, Treasurer Reform School, Lansing, Michigan.

		TREASURER, DEBIT.			
1886.					
Oct. 1.....	To cash balance on hand.....			\$13,839 41	
1887.					
June 30..	" " received from State Treasurer, current expenses.....			26,000 00	
	" " " from State Treasurer, special expenses.....			4,450 00	
	" " " at institution for shop work.....	\$11,436 63			
	" " " at institution for entrance fees, visitors.....	128 75			
	" " " at institution for sale farm stock hogs, etc.....	673 09			
	" " " for sale of land.....	5,000 00			
	" " " at institution for interest.....	156 08			
	" " " at institution for miscellaneous items.....	180 13		17,524 63	\$61,814 09
		TREASURER, CREDIT.			
1886.					
Oct.	By Abstract No. 1, Current Expenses.....			\$7,163 65	
Nov.	" " 2, " "			8,974 85	
Dec.	" " 3, " "			4,331 07	
1887.					
Jan.	" " 4, " "			7,126 75	
Feb.	" " 5, " "			5,425 33	
March...	" " 6, " "			5,831 18	
April....	" " 7, " "			5,669 07	
May.....	" " 8, " "			5,885 87	
June....	" " 9, " "			4,578 93	
June 30..	By Cash on hand.....			12,307 34	\$61,814 09

TREASURER'S REPORT.

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State of Michigan in Account with W. Donovan, Treasurer Reform School, Lansing, Michigan.

TREASURER, DEBIT.			
1887. July 1...	To Cash balance on hand.....	\$12,807 34	
1888. June 30..	" " received from State Treasurer, current expenses.....	52,000 00	
	" " " from State Treasurer, special expenses.....	10,750 00	
	" " " from Marder, Luse & Co., ref'd Dep't Tech...	33 24	
	" " " at institution for shop work.....	\$12,235 59	
	" " " at institution for entrance fees, visitors.....	222 80	
	" " " at institution for sale of land.....	1,700 00	
	" " " at institution for sale of farm stock, hogs, etc.....	883 62	
	" " " at institution for interest.....	412 64	
	" " " at institution for miscellaneous items.....	715 06	
		\$16,269 21	\$91,359 79
TREASURER, CREDIT.			
1887. July	By Abstract No. 1, Current expenses.....	5,307 19	
"	" " 2, Special expenses.....	16 00	
Aug.....	" " 3, Current expenses.....	6,276 98	
"	" " 4, Special expenses.....	92 78	
Sept.....	" " 5, Current expenses.....	5,346 18	
"	" " 6, Special expenses.....	1,745 33	
Oct.....	" " 7, Current expenses.....	4,261 56	
"	" " 8, Special expenses.....	1,176 06	
Nov.....	" " 9, Current expenses.....	5,219 68	
"	" " 10, Special expenses.....	4,242 25	
Dec.....	" " 11, Current expenses.....	6,019 91	
"	" " 12, Special exrenses.....	838 44	
1888. Jan.	" " 13, Current expenses.....	9,790 93	
"	" " 14, Special expenses.....	674 90	
Feb.....	" " 15, Current expeeses.....	6,704 01	
"	" " 16, Special expenses.....	984 93	
March....	" " 17, Current expenses.....	6,490 47	
"	" " 18, Special expenses.....	577 02	
April.....	" " 19, Current expenses.....	6,054 83	
"	" " 20, Special expenses.....	209 61	
May.....	" " 21, Current expenses.....	6,608 76	
"	" " 22, Special expenses.....	694 89	
June	" " 23, Current expenses.....	7,994 04	
"	" " 24, Special expenses.....	482 43	
" 30..	Cash on hand.....	3,540 72	\$91,359 79

Reform School in Account with W. Donovan, Treasurer, for the fiscal year ending June 30, 1887.

REFORM SCHOOL.

Date.	Treasurer's Debits.	Ice-house and Meat Room.	Laundry Machinery.	Kitchen Furniture.	Sewerage System.	Steam-pipe Tunnel.	Sidewalks and Fences.	Total of Building, Special, etc.	Current Expense.	Aggregate.	Aggregate, exclusive of Balances and Transfers.
		Abstract Bb.	Abstract Bb.	Abstract Bb.	Abstract Bb.	Abstract Bb.	Abstract Bb.		Abstract Aa.		
1886. Oct. 1.	By balance (on hand)..... cash from State Treasury.. cash from earnings of in- stitution..... cash from other sources.....	\$500 00	\$500 00	\$200 00	\$2,000 00	\$1,000 00	\$250 00	\$4,450 00	\$13,839 41 26,000 00 11,426 63 6,088 06	\$13,839 41 30,450 00 11,426 63 6,088 06	..... \$30,450 00 11,426 63 6,088 06
1887. June 30	Total available during..... Footings.....	\$500 00 \$500 00	\$500 00 \$500 00	\$200 00 \$200 00	\$2,000 00 \$2,000 00	\$1,000 00 \$1,000 00	\$250 00 \$250 00	\$4,450 00 \$4,450 00	\$57,364 09 \$57,364 09	\$61,814 09 \$61,814 09	\$47,974 68 \$47,974 68
	Treasurer's Credits.	Abstract B.	Abstract B.	Abstract B.	Abstract B.	Abstract B.	Abstract B.	.	Abstract A.		
1886. Oct. 1.	To disbursements (exclusive of loans paid).....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	\$49,506 75 \$49,506 75	\$49,506 75 \$49,506 75	..... \$49,506 75
1887. June 30	Total debits during..... To balance (on hand) to new account..... Footings.....	..... \$500 00 \$500 00	..... \$500 00 \$500 00	..... \$200 00 \$200 00	..... \$2,000 00 \$2,000 00	..... \$1,000 00 \$1,000 00	..... \$250 00 \$250 00	..... \$4,450 00 \$4,450 00	\$49,506 75 \$7,857 84 \$57,364 09	\$49,506 75 \$12,307 84 \$61,814 09	..... \$49,506 75 \$49,506 75

Reform School in Account with W. Donovan, Treasurer, for the Fiscal Year ending June 30, 1898.

TREASURER'S REPORT.

Date.	Treasurer's Debits.	Steam-pipe Tunnel.	Laundry Machinery.	Ice House and Meat Room.	Stairwells and Trenches.	Department of Technology.	Kitchen Furniture.	Sewerage System.	Total of Building, Special, etc.	Current Expenses.	Aggregate.	Aggregate, Exclusive of Balance and Transfers.
		Abstract Bb.	Abstract Bb.	Abstract Bb.	Abstract Bb.	Abstract Bb.	Abstract Bb.	Abstract Bb.	Abstract Bb.	Abstract Aa.		
1897. July 1.	By balance on hand.....	\$1,000 00	\$200 00	\$200 00	\$250 00 250 00	\$5,000 00	\$200 00	\$2,000 00 5,600 00	\$4,460 00 10,760 00	\$7,857 34 62,000 00	\$12,807 34 62,760 00	\$22,760 00
	cash from other sources.....	.....	.....	.....	.....	35 24	.....	.....	35 24	12,876 69 3,933 62	12,881 69 3,966 61	12,886 69 8,966 69
1898. June 30	Total available during..	\$1,000 00	\$200 00	\$200 00	\$500 00	\$5,035 24	\$200 00	\$7,600 00	\$15,233 24	\$79,126 65	\$91,359 79	\$79,039 45
	Footings.....	\$1,000 00	\$200 00	\$200 00	\$500 00	\$5,035 24	\$200 00	\$7,600 00	\$15,233 24	\$79,126 65	\$91,359 79	\$79,039 45
1897. July 1	Treasurer's Credits.	Abstract Bb.	Abstract Bb.	Abstract Bb.	Abstract Bb.	Abstract Bb.	Abstract Bb.	Abstract Bb.		Abstract Aa.		
	To disbursements (exclusive of loans paid)	\$1,000 00	\$600 00	\$600 00	\$270 00	\$1,849 64	\$125 00	\$7,500 00	\$11,744 64	\$76,074 68	\$87,819 07	\$87,819 07
1898. June 30	Total debits during..... To balance (on hand) to new account.....	\$1,000 00	\$600 00	\$600 00	\$270 00 280 00	\$1,849 64 3,168 76	\$125 00 75 00	\$7,500 00	\$11,744 64 3,428 70	\$76,074 68 68 02	\$87,819 07 3,540 72	\$87,819 07
	Footings.....	\$1,000 00	\$600 00	\$600 00	\$500 00	\$5,035 24	\$200 00	\$7,600 00	\$15,233 24	\$79,126 65	\$91,359 79	\$87,819 07

Ledger Balances July 1, 1888.

Account.	Dr.	Cr.
Inventory		\$237,363 54
W. Donovan, Treasurer	\$3,540 72	
Land	87,000 00	
Buildings	142,800 00	
Machinery	584 41	
Steam heating and cooking apparatus	12,284 99	
Farming implements—wagons, harnesses and repairs	1,838 75	
Chair work—cane and chair accounts	2,980 09	
Furniture	5,791 80	
Bedding	4,961 61	
Fuel	805 25	
Clothing and shoes	18,581 14	
Provisions	1,141 26	
School furniture	850 00	
General expenses	1,523 48	
School expenses	1,567 50	
Library	1,186 61	
Painting	124 36	
Farm account	3,401 75	
Current expenses		52 02
Hospital	75 00	
Postage	25 00	
Printing and stationery—blanks, etc.	98 48	
Department of technology		3,183 70
Kitchen furniture		75 00
Sidewalk and fences		230 00
Bills receivable	2,500 00	
Printing plant	1,816 80	
Total	\$240,904 26	\$240,904 26

SUMMARY OF INVENTORY OF PROPERTY.

JUNE 30, 1888.

Notes and accounts (chair work and bills receivable).....	\$3,976 86
Land and buildings.....	180,800 00
Steam heating, cooking, etc.....	12,234 99
Farm account, stock, hay, grain, etc.....	3,401 75
Farm implements, wagons, harnesses, etc.....	1,838 75
Machinery in shops, tools, etc.....	564 41
Fuel.....	805 95
Chair work (cane, etc.).....	1,503 23
Clothing and shoes.....	18,581 14
General expenses, crockery, brooms, pails, etc.....	1,523 46
Provisions.....	1,141 86
Library.....	1,186 61
Hospital supplies, etc.....	75 00
School supplies, books, etc.....	1,567 50
School furniture.....	850 00
Stationery, blanks, etc.....	93 46
Postage.....	25 00
Bedding.....	4,961 61
Furniture.....	5,791 30
Paints, oils, etc.....	124 86
Printing office plant.....	1,816 30
	<hr/>
	\$237,363 54

OFFICERS AND EMPLOYES.

JUNE 30, 1888.

C. A. Gower.....	Superintendent.....	\$2,000 00
E. C. Bank.....	Assistant superintendent.....	1,200 00
Mrs. Dora L. Gower.....	Matron.....	No salary.
Miss Nellie J. Pratt.....	Assistant matron.....	300 00
J. E. St. John.....	Book-keeper and superintendent's clerk.....	900 00
J. H. Wellings.....	Physician.....	300 00
A. O. Thompson.....	Teacher.....	700 00
E. J. Brown.....	".....	600 00
Mrs. A. E. St. John.....	".....	300 00
Mrs. Viola Merrylees.....	".....	300 00
Mrs. Carrie Cowles.....	".....	300 00
Mrs. Jessie Burnett.....	" and pianist.....	385 00
Mrs. Anna R. Bryant.....	".....	250 00
Mrs. Sara Robertson.....	".....	250 00
Miss Maggie Ealer.....	".....	250 00
Mrs. E. A. Timmerman.....	".....	300 00
D. M. Merrylees.....	Cottage manager and overseer of cane shop.....	600 00
O. E. Robertson.....	" " " " " ".....	600 00
Truman Cowles.....	" " " " " carpenter shop.....	600 00
J. A. Burnett.....	" " " " " painting.....	600 00
D. E. Bryant.....	" " " " " printing office.....	600 00
William Aris.....	Shoe-maker.....	600 00
D. M. Vandawalker.....	Stenographer.....	420 00
Fredrick Lutz.....	Baker.....	480 00
W. J. Peters.....	Tailor.....	360 00
C. W. Cowles.....	Acting farmer.....	480 00
A. M. Knapp.....	Assistant farmer.....	312 00
D. B. Baldwin.....	Engineer.....	660 00
Frank Marshall.....	Assistant engineer.....	360 00
John Toolan.....	Watchman.....	420 00
D. D. Lewis.....	Teamster.....	300 00
C. A. Dewitt.....	".....	300 00
F. L. Towns.....	Stock man.....	300 00
J. M. Hewitt.....	Overseer of grounds.....	300 00
Mrs. Elizabeth R. Frost.....	Hospital nurse.....	228 00
Miss Mary A'Hearn.....	Supervisor of boys' kitchen.....	228 00
Miss Jennie Brown.....	" " " dining-room.....	228 00
Mrs. Alvira Goodhue.....	" " " dormitory work.....	228 00
Mrs. Anna L. Pinkerton.....	" " " " ".....	228 00
Mrs. C. L. Pratt.....	" " " " ".....	228 00
Mrs. Sarah Williams.....	" " " laundry.....	240 00
Mrs. Sarah Merrill.....	Cook.....	208 00
Miss Augusta Szepanek.....	Supervisor of officers' dining-room.....	208 00
Mrs. Maggie A. Tyrol.....	Servant.....	182 00

NOTE.—Officers living off institution grounds are allowed \$10 a month in addition to salary here given.

A CIRCULAR LETTER.

To Parents and Friends of Inmates of the Reform School :

----- having become an inmate of this institution, you are by this circular informed in reference to some matters which are of interest for you to understand.

He is committed to our care, to remain until he attains the age of ---- years, unless sooner discharged by law. The only authority authorized to discharge him is the *Board of Control of the Reform School*. He will remain in the institution until the full expiration of his term of commitment, unless it appears to our Board of Control that it will be better for him to leave at an earlier date. While this decision is influenced largely by the conduct of the boy, it is also very frequently dependent upon the character of the home to which he will go if released.

We are often importuned to release boys very soon after they are received into the school. To any anticipating making such an effort, we would say that our Board expect to retain a boy in the institution until they believe that he is thoroughly established in habits of well-doing, and until they are confident that he has a suitable home awaiting him. Experience demonstrates that good boys, who have good homes, are not often sent to the Reform School. It is also true that bad boys and poor homes are not usually made permanently better in the space of a few weeks.

Every boy in our institution is obliged to be in school four and one-half hours each day, and works the same length of time. Ten hours are allowed for sleep and five hours for meals and recreation. We endeavor to give each boy such work as is suited to his strength, capacity and tastes. Most of the boys who remain with us two years or more, take with them, when leaving, such a knowledge of some trade as enables them to earn living wages at once.

Our boys have an abundance of nutritious food, and the health of the institution is so uniformly good as to give no occasion for solicitude in this direction. In case, however, any boy should be seriously ill, his friends are immediately notified. We have a hospital building which is complete in all its appointments, where one of our number who may be sick has the choicest care from a competent nurse and a skilled physician.

We have Sunday School for an hour each Sunday morning, and appropriate religious services, conducted by some clergyman, each Sunday afternoon.

The Catholic priest, from the city, visits the institution as often as once in two weeks, when all Catholic boys desiring to meet him have the opportunity.

Our boys are encouraged to write to their friends, and postage and stationery for this purpose are furnished them once in four weeks. They are also allowed to write once in four weeks at their own expense. No boy, however, is ever *compelled* to write to his friends. We are glad to have a boy's friends write him as often as they desire, suggesting, however, that their letters should always be of such a character as will tend to encourage him and make him happy.

All letters must be in *English*, and should always be signed with the full name of the writer, and with the street and number of house to which a reply must be addressed, if the writer lives in a city. Letters to the boy should be addressed to him, Lansing, Mich., "*in care of Reform School.*"

Friends are also urged to send home newspapers and other periodical literature of an unobjectionable character.

Occasional short visits of parents and near friends are allowed and desired, at which times we are glad to take special pains to give the fullest information possible as to the work of the school and the conduct and prospects of the boy who is being visited. There are no provisions, however, at the school, for either lodging or boarding visitors.

Boys are not allowed to receive visits from friends on Sunday.

We are happy to have our boys remembered occasionally by small presents of anything that is not incompatible with the proper management of the institution. Express charges must always be prepaid.

Boys are not however, allowed, in their letters home, to importune their friends for money or presents of any kind.

Any communication in reference to the release of a boy must always be addressed to the Superintendent or to the Board of Control, and in no case to the boy. Letters containing allusions to the subject of his release will not be delivered.

It will always give us pleasure to answer any questions you may desire to ask in reference to our institution or any of its inmates.

Very respectfully,

G. A. GOWER,

Superintendent.

COMMUNICATIONS

FROM THE STATE BOARD OF CORRECTIONS AND CHARITIES.

Prof. C. A. Gower, Supt. State Reform School, Lansing, Mich.:

DEAR SIR,—In compliance with your notice of June 22d, the Board of Corrections and Charities on the 6th inst. examined—by Hal O. Wyman, M. D., Commissioner, and its Secretary—the plan of the Board of the Reform School for a system of sewerage for such institution.

The plan, it is believed, is well adapted for the purpose, and is perhaps the best that can be adopted, considering the amount appropriated for the purpose, which precludes direct connection with the river.

Yours respectfully,

L. C. STORRS,
Secretary.

LANSING, Oct. 4, 1888.

To the Board of Control of the Reform School, Lansing:

GENTLEMEN,—The Board of Corrections and Charities having visited the institution under your charge, as required by law, and having considered the estimates submitted by you of the amounts deemed necessary for current expenses and special purposes for the next biennial period, begs leave to report as follows:

It approves of the item of “current expenses” as given, that is fifty-nine thousand dollars a year, less the amount of earnings estimated at six thousand dollars, making the appropriation desired for this item fifty-three thousand dollars for each of the years 1889 and 1890.

The item of \$250 for dry room is approved.

The sum for maintenance of department of technology, \$1,500, is favored as opening a wider field for the future employment of the boys.

The item of \$500 for a root cellar is favorably considered.

With regard to the amount asked for “construction of sidewalks, paving gutters on Pennsylvania avenue and grading grounds, \$6,000,” we would say that having examined into the matter and investigated your estimate of same now on file in your office, that we consider the amounts asked for are reasonable and as low as the work can be done for. Except for the amounts asked for excavating the proposed driveway and filling in with sand and gravel, for

which \$2,700 is asked, we consider your requests not only proper but necessary. As regards items making up the \$2,700 above spoken of, while we consider the same a very desirable improvement, we are not satisfied that it is at this time necessary.

Very respectfully,

GEO. D. GILLESPIE,

Chairman.

L. C. STORRS, *Secretary.*

SECOND BIENNIAL REPORT

OF THE

LIVE STOCK SANITARY COMMISSION

FROM

MARCH 1, 1887, TO DECEMBER 31, 1888.

BY AUTHORITY.

LANSGING:
DARIUS D. THORP, STATE PRINTER AND BINDER.
1889.

STATE LIVE STOCK SANITARY COMMISSION.

MEMBERS OF THE COMMISSION.

H. H. HINDS, President,	- - - - -	STANTON.
C. F. MOORE, Secretary,	- - - - -	ST. CLAIR.
J. J. WOODMAN,	- - - - -	PAW PAW.

STATE VETERINARIAN.

PROF. E. A. A. GRANGE,
STATE AGRICULTURAL COLLEGE,
LANSING, MICHIGAN.

REPORT OF THE STATE LIVE STOCK SANITARY COMMISSION.

To the Governor of Michigan :

SIR—Act 182, Session Laws of 1885, under which the State Live Stock Sanitary Commission derives the authority for its existence, provides, in section 21: "The commission shall make biennially a detailed report of its doings to the Governor, which report shall be transmitted to the Legislature at its regular biennial session."

A literal compliance with this provision of law, in this instance, would make a pamphlet of such voluminous proportions as to make it wearisome for the Governor and members of the Legislature to undertake to follow the details through. The commission, therefore, submit the following as a general report of the results of their acts for the years 1887 and 1888, omitting details which, in a general way, would be uninteresting.

We also make some suggestions which may be of some interest to the public.

At the date of the close of our last biennial report, covering the years 1885 and 1886, contagious pleuro-pneumonia, that most destructive of all cattle diseases, had been found to exist in Cook county, Ill., among thousands of cattle in and about Chicago, and it had been found necessary, in protecting our great cattle industries, to establish a strict quarantine prohibiting the importation of any neat cattle to this State from said Cook county for any purpose whatever. The following paragraph is taken from that report, same having been written just as the report went to press in February, two years ago. "The situation at Chicago, so far as the cattle industry of the country in general and this State in particular are concerned, shows no improvement. A few thousand cattle have been slaughtered in distilleries and elsewhere but thousands of diseased and exposed cattle are still scattered in various parts of the city, and there seems to be no well founded hope that the disease will be stamped out at Chicago for a long time to come. The desire of the cattle growers of the State, that was concurred in by the Governor and Legislature, that Congress would, at its present session, pass the so-called 'Miller bill,' the immediate purposes of which is to set on foot proper national machinery to stamp out contagious pleuro-pneumonia in the United States seems unlikely to be realized, in which event it seems to be an inevitable necessity that for the next two years at least we shall be compelled to try and protect our great and constantly growing cattle industries by a rigid maintenance of quarantine regulations against all infected localities. Should an outbreak of this exotic animal disease, for the existence of which in this country Michigan nor none of its citizens are in any way responsible, occur in this

State, it will undoubtedly be the best and only safe policy to strike an imaginary line around the diseased center sufficiently comprehensive to include all the diseased and exposed cattle, and kill all within the line without hope of assistance from national authority."

The prophecy therein recorded, relating to the fate of the "Miller bill," was realized, but fortunately for the cattle industries of the country in general, and this State in particular, in an omnibus appropriation bill passed during the very last hour of the life of the 49th Congress, an item of half a million of dollars was inserted for the use of the Bureau of Animal Industry to be used in stamping out contagious plureo-pneumonia in this country. The first session of the 50th Congress duplicated the same appropriation. The Bureau of Animal Industry acted promptly and the work is still proceeding on the Atlantic sea-board, the disease having been already effectually stamped out in the interior and in the west.

Immediately on the action of Congress, first above referred to, the Bureau of Animal Industry organized for the serious work on hand at Chicago. Prof. James Law, of Cornell University, was placed in charge of the work in co-operation with the efficient Illinois Live Stock Sanitary Commission. An ample corps of assistants were retained, together with a full complement of other employés and police, to see that all regulations were properly observed. The policy of peremptory slaughter of all diseased and exposed animals was undertaken. The pole ax and butchers knife were used without mercy, and the policy thus pursued was attended with speedy and perfect success. A very large share of the credit for this result is due the Illinois Commission. This required a large outlay of money but was much the cheapest and the only safe policy to pursue. Contagious plureo-pneumonia was stamped out, in and about Chicago. The last acute case was destroyed on July 28th, 1887. The great menace to the cattle industries of the west from this dread disease was thereby removed.

It was deemed best by this Commission to maintain our efficient quarantine regulations for a sufficient period to guarantee safety, and with some modifications on October 25, 1887, the regulations were maintained until May 8, 1888, when they were removed.

Some supposed cases of contagious pleuro-pneumonia have been reported by local authorities in this State, but this Commission is warranted in stating that there never was a case within the borders of this State.

The disease that is and will probably permanently continue to be a menace to Michigan cattle interests is Texas or splenic fever. A continual stream of these contagion carrying cattle are constantly passing over our Trunk line railroads from their native breeding pastures in the southwest to the meat consuming markets of the east. Not only is contact with these so-called Texas cattle, during all the months of the year when we do not have heavy frosts, fatal to our native cattle, but all the cars, yards and pens in which these are handled, and the streets and commons over which they may be driven, become infected with the germs of the disease, and nothing seems to avert the danger until a hard frost comes in the fall when all danger for that season ceases. By the provision of law, Act 198, Laws of 1885, as amended by Act 57, Law of 1887, it is contemplated that all cars that carry any of this class of cattle, as well as all stockyards in which same are handled shall be branded "For the transportation (or yarding) of Texas cattle only," and that no native cattle shall be admitted to these cars or yards between the

1st day of April and the 1st day of November of each year. This provision of law, so far as it applies to railroads in branding cars has never yet been complied with in the slightest particular. As was noted in our last report this Commission for the year 1886 adopted certain rules and regulations prescribing certain streets only on which these southern cattle should be driven in the city of Detroit, in transit from the stockyards without the city to the various slaughter houses that are located promisciously within the city, and appointed an agent to see that the regulations were observed. As noted in that report the result of that action at Detroit was to reduce the loss of milch cows in that city from this disease, amounting to thousands of dollars annually to practically nothing. This experiment was so eminently satisfactory at Detroit that the same policy was pursued at that point for the year 1887 with like satisfactory results. This action at Detroit, however, afforded no sort of protection to any other point in the State, and outbreaks occurred at Adrian, Grand Rapids, and elsewhere, causing large cash losses, and very seriously deranging the business of milkmen, string butchers and others. Thus matters stood at the opening of the season of 1888 when the Commission decided to apply the heroic treatment of prohibition to all traffic in this class of cattle in this State for the past season. This plan was considered by this Commission not only possible of execution, but entirely practicable, although arrived at after consultation with the Governor, the Railroad Commissioner, the managers of leading railroads, stock growers, butchers, farmers and other interested parties, a majority of whom were opposed to the plan. The Commission therefore, on May 8, adopted prohibitory rules and regulations as above stated, and on May 12 the Governor issued his proclamation publishing same, which is as follows:

MICHIGAN.

PROCLAMATION PROHIBITING THE IMPORTATION OF NEAT CATTLE FROM SOUTH OF THE THIRTY-SIXTH PARALLEL, NORTH LATITUDE, 1888.

PROCLAMATION.

WHEREAS, a clause of Act 182, Session Laws of 1885 declares in substance and language, that whenever the Governor of the State shall have good reason to believe that any dangerous, contagious or infectious disease has become epizootic in certain localities in other States, territories or countries, or that there are conditions which render such domestic animals from such infected districts liable to convey such disease, he shall, by proclamation, prohibit the importation of any live stock of the kind diseased, into the State, etc.; and

WHEREAS, It is clearly understood that cattle coming from the southern portion of the United States are affected with a contagious disease, known as Texas or splenic fever, which is very fatal to our northern cattle, and which annually, for years past, has caused serious loss among the cattle stock of this State, and

WHEREAS, The State Live Stock Sanitary Commission did on May 8 adopt the following quarantine regulations regarding the importation of so-called Texas cattle, with the view of the absolute prohibition of their admission to this State previous to the 1st day of November next, viz.:

**" RULES AND REGULATIONS OF THE MICHIGAN LIVE STOCK SANITARY COMMISSION
RELATING TO THE IMPORTATION OF SO-CALLED TEXAS CATTLE.**

WHEREAS, by Sec. 4, Act 182, Session Laws of 1885, it is made the duty of the State Live Stock Sanitary Commission to protect the health of the domestic animals of the State from all contagious or infectious diseases of a malignant character, and for this purpose it is hereby authorized and empowered to establish, maintain and enforce such quarantine, sanitary and other regulations as it may deem necessary, and

WHEREAS, The bringing to this State for slaughter or other purposes so-called Texas cattle, or cattle raised south of the thirty-sixth parallel of north latitude, and that have not subsequently been kept continuously at least one winter north of said parallel, and which may be brought within the limits of this State between the first day of April and the first day of November following, very seriously endangers the health of our cattle stock; and

WHEREAS, As a matter of fact so-called Texas or splenic fever so fatal to our northern cattle is only contracted from contact with these cattle or in the recent environments of the same;

Now therefore, It is hereby ordered and directed by the Live Stock Sanitary Commission of the State of Michigan, in accordance with the Act heretofore referred to, that hereafter and until the first day of November next no cattle coming from south of the thirty-sixth parallel of north latitude, and that have not wintered north of the said thirty-sixth parallel, shall be brought to any place in this State for the purpose of slaughter, or for any other purpose except such cattle be in transit across this State, and these through cattle shall not be unloaded for feeding or other purposes in this State, except in yards designated and branded for the feeding of Texas cattle only.

In order that no expense and practically no inconvenience may be caused to any parties desiring to ship any cattle to this State for slaughter or for other purposes, that are not prescribed by these quarantine regulations, coming from the two points from which the cattle of commerce are principally shipped to this State, viz.: The Union Stock Yards at Chicago and the Stock Yards at East St. Louis, this Commission will, on May 21 next, establish an agency in the vicinity of each of the above named stock yards, at which all parties must apply who desire to ship cattle to this State from these points, and upon presenting the proper evidence at the agency, showing that the proposed shipment of cattle are not prohibited from coming to this State by the above order a certificate permitting the shipment to any part of this State will be issued to the shipper without cost to him.

Now therefore, I, Cyrus G. Luce, Governor of the State of Michigan, by virtue of the authority vested in me by law, issue this, my proclamation, and it is hereby ordered that from and after the 21st day of May, and until the first day of November next, the importation of all neat cattle to this State from south of the thirty-sixth parallel of north latitude, and that have not wintered north of said thirty-sixth parallel, is hereby prohibited and forbidden, except such cattle as are in transit across this State, and they shall only be unloaded in this State for the purpose of feeding and watering, and then only in yards branded and lettered for the "Feeding of Texas Cattle only." And I hereby call the attention of all shippers of live stock, transportation companies and all other parties interested to the manifestly fair and proper rules and regulations of the State Live Stock Sanitary Commission heretofore re-

cited, relating to the subject and to the laws under which the same are made and promulgated.

Done at Lansing, Michigan, this 12th day of May, A. D. 1888.

BY THE GOVERNOR.

CYRUS G. LUCIE.

F. B. EAGAN,

Deputy Secretary of State.

The carrying out of this plan was attended with considerable expense. L. K. Woodman of Paw Paw was appointed agent at St. Louis, and W. S. Walker, of Utica, at Chicago. The results may be summed up in a statement covering a single line, and that is that not a single case of Texas or splenic fever was reported in Michigan for the year 1888. There was shipped to Michigan between the 21st day of May and the 1st day of November, from Chicago, 374 cars carrying 8,662 head of cattle, and from St. Louis 318 cars carrying 8,375 head of cattle. A total of 692 cars, carrying 17,037 head of cattle.

Various theories have obtained among different parties, all having extensive opportunities of observation and keen perceptions in reasoning from cause to effect, in accounting for the particular manner in which the contagion of Texas Fever is communicated to our northern or native cattle. For instance, some gentlemen who have had large opportunities for observing the characteristics and contagiousness of this disease believed that native cattle might be handled with impunity in cars and pens recently occupied by the Texan—in fact that the native might actually be handled with the Texan so long as they were handled on dry feed, but as soon as the element of green vegetation was introduced and the native feed on the grass that grew up through the excrement and filth left in the track of the Texan, then and not till then was the native in danger. On the other hand our observations with the disease in this State had convinced us that the recent environments of the Texan, whether car, yard, street crossing, or pasture lot, were all susceptible vehicles for conveying the disease germs, and should be avoided and proscribed for the native. With these widely divergent theories as to the proper manner of dealing with these Texans, among the different State authorities, to prevent the annual large losses that is occurring among the native cattle of the northern States from Texas fever, it was thought best by the superintendent of the Union Stock Yards at Chicago to call a meeting early the past season of representatives of the northern States most interested, to confer upon the subject of instituting a series of experiments to determine some of these questions. The conference was held and this commission was represented. A series of experiments were undertaken and were carried on during the past season at the Chicago Stock Yards, and resulted, so far as the tests were concerned, in confirming the judgments we had formed in observing the spread and development of the malady in this State. It is perhaps proper to here note that the National Cattle Growers' Association, at their annual meeting in Chicago in November last, instructed their executive committee to ask Congress to enact national laws relative to handling these Southern cattle similar to our State laws, and also advised the Legislatures of other Northern States to enact similar laws.

The Governor and the Commission have been repeatedly importuned, during the past season, by butchers and butchers associations in different parts of the State, to so modify our prohibitory regulations regarding Texas

cattle as to admit these animals to the State for immediate slaughter, provided they were discharged from the cars at the gates of the slaughter houses. These gentlemen have very truthfully stated that thousands of carcasses of these same proscribed cattle are annually imported to our State and sold to our people in the shape of dressed beef. They desired to buy the same class of cattle on foot to meet this competition. The Commission have, however, been constrained to adhere to their prohibitory regulations as originally adopted, believing that the only certain way of protecting our native cattle from this malady. Our cattle have been protected for the last year as already stated. Of course it will be readily understood that this Commission has no jurisdiction over the question of what kind of dressed meat shall be sold to our people, whether unwholesome or not. The Commission were agreed upon one thing, and that was, that the annual losses from Texas or splenic fever amounted to thousands of dollars in each of several northern States, the aggregate forming a vast sum entirely out of all proportion to the profit accruing to all parties engaged in an unlimited or unregulated traffic in these Southern cattle, and that an intelligent consideration of this subject ought to afford an opportunity to devise means of handling this traffic with comparatively little danger to our vast Northern cattle industries. Hence the action taken and results reached.

During the past year very serious criticisms have been made by health authorities and newspaper articles on the action or non-action of this Commission relative to the sale of lump-jawed cattle at Detroit. The facts are that there has never yet been reported to this Commission the existence of any particular animal or animals effected with lump-jaw at Detroit or elsewhere in this State, whereby the Commission might take action relative to their destruction. The statement that a Detroit meat inspector "had seen this class of cattle killed and sold in Detroit, and a carcass and two hides shipped to Mt. Ulemens," does not form a desirable basis to found a case for damages to the State under our Live Stock Sanitary laws. The fact that the animals were dead and the carcasses removed from the environments of other cattle would accomplish the intentions of our Live Stock Sanitary laws, to protect our domestic animals from this infectious disease. The law under which this Commission is acting does not contemplate that the Commission shall say what meat is wholesome for man to eat nor what should be condemned. The health authorities are charged with that duty.

So called "lump jaw," scientifically named *Actinomyces*, is a cancerous development of one of the several scorbutic or scrofulous diseases that annually carries off large numbers of our cattle, and is undoubtedly hereditary and probably mildly infectious. The fair presumption, however, is that not a dozen cases of lump jaw exists in the State to-day.

A far more serious development of one of the scrofulous diseases above referred to is tuberculosis. Undoubtedly this disease has gained a serious foothold in our State, and is causing large losses among our cattle stock. It is beyond question both infectious and contagious, particularly in the pulmonary development or consumption of the lungs. The commonly accepted theory is that it is communicable to man, not only by direct contact but also in the partaking of the milk and meat of these diseased animals. This Commission has not as yet been called upon to act in any of these cases, but when the question arises it will engage their very serious attention.

It gives us satisfaction to be able to state that some of the national experi-

ment stations have already entered upon the work of investigation of this plague, and we hope to derive valuable knowledge from these investigations.

Section 22 of Act 182, Laws of 1885, exempted sheep and horses from the operations of our live stock sanitary laws, and therefore contagious and infectious diseases of these domestic animals did not come within the jurisdiction of this Commission up to date of our last report, Act 47, Laws of 1887, placed both sheep and horses under the operation of these sanitary laws.

Contagious diseases of sheep have thus far claimed but little of the Commission's attention. Some cases of what appeared to be contagious ophthalmia have been reported and disposed of. Recently cases of scab or mange have been presented for the consideration of the Commission, and the causes and prevention of this contagious parasitical disease of sheep is now under consideration with the commission. In some of the semi-tropical sheep-growing countries scab is among the most serious menaces to the wool-growing industries, but fortunately the climate of our State does not seem favorable to the spread and development of this disease, and therefore it has not appeared a serious obstacle to the success of our flock masters.

As may be readily anticipated the principal contagious disease affecting horses reported to and claiming the attention of the Commission is glanders and its companion disease, with a different development, farcy. Glanders is a loathsome, terrible infectious, and practically incurable disease, to which not only the horse and several other of the lower animals are susceptible, but even man himself.

Experiments and observations in this country and Europe, covering scores of years, have substantially determined that cattle are not susceptible to glanders. The horse and mule seem to afford the only avenue through which this pestilence is spread in this State. Since this part of the law has become operative scarcely a week passes without outbreaks of this disease being reported from various points in the State, and from the wide diversity of territory from which these diseased animals are reported, it becomes entirely apparent that during the past years, when only the Public Health Laws could be applied to wiping out this malady, it steadily made head against the law. Under the present law the remedy of the rifle or bleeding phlegm seems to be entirely effectual.

It may be stated as a fact that the members of this commission have devoted more hours of time to dealing with this particular disease among horses than they have to all the other diseases affecting our domestic animals, and that too, notwithstanding the fact that horses and their diseases have only been under the jurisdiction of this Commission for a period of less than two years. This Commission has condemned and destroyed horses pronounced affected with glanders by the State Veterinarian in the counties of Alcona, Branch, Crawford, Calhoun, Chippewa, Cass, Delta, Gogebec, Huron, Hillsdale, Ingham, Ionia, Jackson, Mecosta, Mason, Montcalm, Monroe, Muskegon, Macomb, Otsego, Sanilac, and St. Clair. In some of these counties glanders were found in several different townships. Cases were also reported from Berrien, Luce, Lenawee, Roscommon, and St. Joseph counties, as well as several reported cases in the counties first named, which, upon investigation, did not prove to be glanders.

The law under which we operate directs that "whenever the Commission shall direct the killing of any domestic animal or animals it shall be the duty of the commissioners to appraise the animal or animals condemned, and in

fixing the value thereof the commissioners shall be governed by the value of said animal or animals at the date of appraisement."

The Commission, as at present constituted, believe that a horse having glanders clearly developed has no market or selling value, is in fact worthless, and of all the horses we have thus far ordered destroyed, with four exceptions, we have awarded the nominal damage of one dollar for each case. The disposing of one of these diseased brutes is a more serious and expensive undertaking as the animal frequently has to be taken some distance from a city or village for proper burial. The ground is at times frozen deeply, the snow may be deep, or privilege of entry to woods places for burial, may be denied by the owner. These items combined, however, amount to but a small percentage of the cost to the State, thus far, in dealing with this vile disease. The great items of expense are the traveling expenses and per diem of members of the Board and State Veterinarian in reaching these cases, scattered as they are, in various parts of the State.

The Commission are unable, after giving the subject careful thought, to suggest a cheaper and at the same time safe and effectual plan of dealing with this disease. If the law was changed and authority placed in the hands of local officials it is very questionable if the State would save financially, and besides the local officials might not readily detect the disease from lack of experience in observing its characteristics. Their appraisement of values would probably cover a rather wide range, usually about the price of good sound horses, as is indicated by correspondence reaching the Commission, reporting cases where probable value is stated. In fact a local board of health in a recent case reported from a distant county undertook to act for this Commission, of course without authority of law or of the Commission, and determined that an aged mule had glanders and therefore ordered its destruction and appraised and fixed its value at the sum of \$135.

The statutes of some states provide and declare that a horse having glanders or farcy shall be peremptorily slaughtered without any compensation whatever. On the other hand the practice of the sanitary authorities in some states is in the line of allowing full value of animals on the basis of health, and then destroying all exposed as well as all the affected horses. The motive that leads to the adoption of this policy is founded on the theory that the plan will induce all parties having any suspicious cases to bring them forward and report them at once. This plan is of course very expensive, and tends to induce irresponsible parties to import to the State diseased and glandered horses with a view of making the State itself furnish a profitable market for these diseased brutes. Our policy has been, as before indicated, to thoroughly investigate all reported cases, and destroy only those pronounced by competent authority as already affected, while in the case of exposed animals we have held them under close watch and surveillance for a reasonable time for the disease germs to incubate. Our observations have led us to the conviction that the disease is only infectious, and that a considerable number of exposed animals are not susceptible, and that being only infectious if a diseased animal were driven along the highway, if not watered at a public trough, or not hitched where healthy animals were subsequently tied, the disease might not be spread.

The disease under our plans of dealing with it seems to be losing ground, and we feel confident that in a large per cent of the localities that we have found it, we have been able to effectually stamp it out.

Jonathan J. Woodman of Paw Paw, Van Buren county, was appointed by the Governor and confirmed by the Senate as a member of this Commission for six years, from the second Tuesday of July, 1887, to succeed Thos. Foster of Flint, Genesee county, whose term of office then expired.

Prof. E. A. A. Grange, of the Agricultural College, was reappointed State Veterinarian for two years, from the second Tuesday of July, 1887. The former cordial relations existing between the Commission and State Veterinarian have continued since our last report.

The report of that official is herewith submitted for the information of all concerned.

All of which is respectfully submitted.

STANTON, MICHIGAN, }
December 31, 1888. }

H. H. HINDS.
C. F. MOORE.
J. J. WOODMAN.

The State Live Stock Sanitary Commission.

OFFICE OF THE STATE VETERINARIAN, }
Lansing, Mich., Dec. 31st, 1888. }

To the President Michigan Live Stock Sanitary Commission :

SIR—I herewith submit the second biennial report of the State Veterinarian from March 5th, 1887, up to the present time. On May 12th, 1887, I examined the cattle of Messrs. Merrill & Rust, of Saginaw City, which had been in quarantine for 90 days on account of some importations by them from the south, and parts from which this State was protected by quarantine law. I found the cattle free from disease and in robust health.

On the 10th of June I held a post mortem on a mare said to be affected with a contagious disease, but found that the aggravated symptoms were the result of an inhuman operation which consisted in plugging the nostrils far back with small sponges.

On the 3rd of August I proceeded to Caseville, Huron county, where I found five horses affected with chronic glanders. From here I went to Ludington to examine a horse reported to be affected with a contagious disease, but after a thorough examination formed the opinion that the horse was healthy. On August 26th, at Bay Port, Huron county, I examined three horses, two of them being affected with glanders, the third one being apparently free from contagious disease. On October 9th I examined two horses in the township of Millbrook, in Mecosta county, both of which were affected with glanders.

On November 2nd I examined a horse at Mud Lake Junction which was affected with glanders. On the 22nd of November I proceeded to Three Rivers to examine a case reported to be glanders, but, after a careful examination, could not discover the symptoms of it or any other contagious or infectious disease.

On the 5th of January, 1888, I examined a horse in Quincy which was affected with glanders, and also one in Kinderhook township, Branch county, affected with the same disease. Two others that I examined the same day were apparently healthy.

On the 1st of February I examined two horses at Harrisville, Alcona

county, both of which were affected with glanders. On the 22nd of February I examined three horses in the township of Cato, Montcalm county. One appeared to be healthy, one was affected with glanders, and the third had farcy. On the same day I examined a horse in Hinton township, Mecosta county, which was affected with glanders.

On the 3rd of March I examined a horse in St. Clair county which appeared to be affected with glanders. On the 6th of March I examined 12 horses in Cato township, Montcalm county, which were apparently healthy, one horse at Maple Valley which was affected with glanders; also one horse in Hinton township, Mecosta county, and one mule at Lakeview, Montcalm county, both of which seemed healthy.

On the 16th of April I investigated a disease among cattle near Corunna, Shiawassee county, which I called bovine mucitis, the peculiarities of which were described in my last report. On the 17th inst. I examined three horses in the township of Ovid, Branch county, which were reported to be affected with glanders, but I could not discover the characteristic lesions of this or other contagious disease among them.

On the 18th inst. I examined a bay mare in the city of Hillsdale, which was affected with glanders. On the 26th of May I examined a horse in Albion, which was affected with glanders.

On the 31st of May I proceeded to examine some young cattle near Three Oaks which were thought by their owner to be affected with contagious pleuro-pneumonia, but I could not discover the symptoms of it or any other contagious or infectious disease among them. On the 1st of June I examined a horse in Beaver Creek township, Crawford county, which was affected with glanders.

On the 12th of June I examined two horses at Adamsville, Calvin township, Cass county, which were affected with glanders. At the same time and place I examined four other horses which appeared to be healthy. On the 17th of July I examined two horses in Elk township, Sanilac county; one was affected with glanders and the other appeared to be healthy. On the 18th inst. I examined three horses at Vanderbilt, Otsego county, one of which was affected with glanders. On the 21st inst. I examined a horse in Sugar Island township, Chippewa county, which was affected with glanders.

On the 31st of July I examined a horse in the township of Northfield, Washtenaw county, but could not discover the lesions of any contagious disease. At the same time and place I examined three other horses which were supposed to have been affected with glanders, but I regarded them as being healthy. On the 22nd of August, in the city of Sault St. Marie, I examined four horses which were affected with glanders, and one horse affected with farcy. In Bruce township, Chippewa county, I examined two horses which were affected with glanders.

On the 24th of August I examined a steer at Fowlerville, Livingston county, which was reported to be affected with contagious pleuro-pneumonia, but I could not discover the symptoms of it or any other contagious or infectious disease in the animal.

On the 20th of September I examined a cow at Bloomingdale, Van Buren county, thought to be affected with contagious pleuro-pneumonia, but, like the last mentioned, I could not discover the symptoms of any contagious or infectious disease in it. I examined five cows and two calves on the same farm which were apparently healthy. On the 5th of October I examined a

horse in Danby township, Ionia county, which was affected with glanders.

On the 22nd of October I examined seven horses in a livery stable at Ironwood, Gogebic county; three of them had glanders, one of them had farcy, one had glanders and farcy, and two of them appeared to be healthy. On the 7th of November I examined two mares and two colts in the township of Wheatland, Sanilac county, which were reported to be affected with glanders; but I could not discover the symptoms of this or any other contagious disease in them. On the 28th of November I examined four horses in Clyde township, St. Clair county, one of which was affected with glanders, the other three were healthy. On the 11th of December I examined a horse at Ludington, Mason county, which was affected with glanders. On the 17th inst. I visited the farm of Messrs. Kneeland & Knight, of St. Johns, Clinton county, to examine a herd of cattle said to be affected with a contagious disease known as anthrax, but after examining them, both alive and dead, I could not discover any of the lesions of that disease. I would add with reference to the malady from which these cattle suffered, that, although it was of a malignant character, yet it would require further investigation to determine whether it is contagious or not; though, as many weeks have elapsed since the investigation, and as none of the other cattle have been reported sick, it is reasonable to suppose that the complaint is not communicable from animal to animal, or if it is so, that the period of incubation is longer than usual in maladies of a contagious nature.

On the 18th inst. I proceeded to the township of Harrison in Macomb county, where I examined a horse affected with glanders. On the 20th I examined a Texas pony in the city of Monroe, reported to be affected with glanders, but failed, after a careful examination, to find any symptoms of that disease.

In closing this report I desire to express a feeling of gratitude for the assistance I have received in my various investigations, and the courteous manner I have been treated by all those, who, through my office, I have been brought in contact with.

Yours respectfully,

E. A. A. GRANGE,
State Veterinarian.

REPORT
OF THE
BOARD OF COMMISSIONERS
OF THE
STATE HOUSE OF CORRECTION
AND
BRANCH OF THE STATE PRISON
IN THE UPPER PENINSULA.

BY AUTHORITY.

LANSING:
DARIUS D. THORP, STATE PRINTER AND BINDER.
1889.

COMMISSIONERS AND OFFICERS.

COMMISSIONERS.

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J. M. WILKINSON.
E. P. ROYCE.

P. A. VAN BERGEN.
JOHN DUNCAN,
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C. H. HALL.

OFFICERS.

E. P. ROYCE,	PRESIDENT.
J. M. WILKINSON,	TREASURER.
GEO. P. CUMMINGS,	SECRETARY.

REPORT.

OFFICE OF COMMISSIONERS,
STATE HOUSE OF CORRECTION AND PRISON, UPPER PENINSULA,
Marquette, Mich., December 5, 1888.

His Excellency, Cyrus G. Luce, Governor of Michigan, Lansing, Mich.:

SIR,—I am instructed by the Board of Commissioners to transmit to you the enclosed annual report, from which you will see that they ask for no appropriation, as they intend to complete the work for which they were appointed with the appropriations already made.

They would suggest the propriety of the appointment of the Board of Control and Warden as soon after the meeting of the Legislature as practicable, as it is desirable to have some officers to take charge of the prison as soon as the contracts are completed, and the commissioners desire to consult with the Board of Control in regard to furnishing the buildings. And as the Board of Control will have the management of the Prison they are the proper Board to report to the Legislature the amount required for the maintenance of the Prison for the next two years.

Very respectfully yours,

GEO. P. CUMMINGS, *Secretary.*

MARQUETTE, Mich., Dec. 1, 1888.

To His Excellency Cyrus G. Luce, Governor of Michigan:

SIR,—The Board of Commissioners of the State House of Correction and Prison in the upper Peninsula have the honor to submit the following report:

Act No. 148, laws of 1885, appropriated \$150,000 for the erection of a State House of Correction and Prison, to be located in the Upper Peninsula of Michigan.

As heretofore reported, the same was located at Marquette, and contract awarded to Messrs. Wahlman & Grip for the erection of administration building, rotunda and cell wing with 156 cells, dining room and hospital building, and boiler and engine house for the sum of \$128,777, to be completed on or before Dec. 1, 1888.

The Legislature of 1887, Act. No. 125, made a further appropriation of 75,712.09 for the completion and furnishing of the said State House of Correction and Prison, and contracts were let under said second appropriation as follows, viz:

Wahlman & Grip, for the erection of cell wing No. 2, boiler stack and conduit.....	\$28,600 00
R. R. French, water supply.....	7,100 00
Samuel I. Pope & Co., steam heating and ventilation.....	10,970 00
United States Electric Lighting Co., lighting.....	5,900 00

UPPER PENINSULA PRISON.

The plans and specifications for all of said work, the several bids received for the same and the contracts above referred to are all on file in the office of the Secretary of State, as required by law.

Disbursements under Act of 1885.

Paid Wahlman & Grip, con't No. 1, estimate 1 to 30 inclusive	\$120,594 53	.....
Less 15 per cent.....	18,089 14		
Paid supt. of construction.....		\$102,505 39	
" Wm. Scott & Co., architects.....		1,229 14	
" Geo. P. Cummings, secretary.....		3,464 98	
" printing and advertising.....		650 00	
" Freeman Bros., livery.....		203 90	
" Office rent, stationery and office expenses.....		97 75	
" H. A. Conant, Secretary of State.....		226 45	
" Gad Smith, Register of Deeds.....		3 00	
" for survey.....		4 25	
" for office furniture.....		108 13	
" R. R. fare secretary to Negaunee..		81 00	
" telegraphing, postage and express.....		1 50	
		16 21	
Total disbursements under act 1885			\$103,534 70
<i>Disbursements under Act of 1887.</i>			
Paid Wahlman & Grip contract 2, estimates 1 to 9 inclusive..	\$23,265 45	.....
Less 15 per cent.....	3,489 80		
Paid for 80 acres of land for water supply.....		\$23,225 65	
" R. R. French, water supply, cont'ct est's 1 to 5 inclusive	\$6,874 50	.....
Less 15 per cent.....	1,031 17		
Paid Wm. Scott & Co., architects.....		5,842 33	
" Samuel I. Pope, heating and ventilating, contract esti- mates 1 to 3 inclusive.....	\$3,996 00	1,182 33	
Less 15 per cent.....	1,349 40		
Paid superintendent of construction.....		7,646 60	
" office rent, stationery and office expenses.....		1,844 21	
" telegraphing, postage and express.....		331 52	
" printing and advertising.....		1 50	
" Freeman Bros. for livery.....		201 63	
" for survey.....		115 00	
		47 75	
Total disbursements under act 1887.....			\$42,340 00
Total disbursements under acts 1885 and 1887.....			150,874 70

REPORT OF THE COMMISSIONERS.

7

Statement Showing Present Status of the Several Contracts.

Wahlman & Grip contract No. 1.....	\$128,777 00	
Amount paid on contract.....	102,505 89	\$26,271 61
Wahlman & Grip contract No. 2.....	\$28,600 00	
Amount paid on contract.....	22,325 65	6,274 35
R. R. French contract.....	\$7,100 00	
Amount paid on contract.....	5,843 33	1,256 67
Samuel I. Pope & Co. contract.....	\$10,970 00	
Amount paid on contract.....	7,646 00	3,324 00
United States Electric Light Co. contract	\$5,900 00	5,900 00
Total balance due on contracts.....		\$43,026 08

Statement showing amount available after completion of present contracts.

Appropriation of 1885.....	\$150,000 00	
Appropriation of 1887.....	72,712 09	
		\$222,712 09
Total disbursements to date.....	\$150,874 70	
Balance due on contracts.....	43,026 08	193,900 78
Balance remaining after completion of present contracts.....		\$31,811 36

The Board deems the above balance of \$31,811.36 sufficient to furnish the prison in all its departments, including kitchen and laundry apparatus. Also to construct entrance gates and watch tower, barn and outbuildings, to furnish tools, stock, wagons, harness, hose cart and hose, engine and boiler for power, as specified in said act 125, laws of 1887. In short, to complete said prison in every respect as contemplated by said act.

It is expected that all the contracts referred to will be completed on or before the first day of February next, and the prison ready for occupancy as soon thereafter as the same can be furnished, not later than April 1 next.

Respectfully submitted by Board of Commissioners State House of Correction and Prison, Upper Peninsula, by

E. P. ROYCE, *President.*
GEO. P. CUMMINGS, *Secretary.*

SIXTEENTH ABSTRACT
OF THE
REPORTS OF SHERIFFS.
RELATING TO THE
JAILS
IN THE
STATE OF MICHIGAN,
FOR THE YEAR ENDING JUNE 30, 1888.

BY AUTHORITY.

LANSING:
DARIUS D. THORP, STATE PRINTER AND BINDER.
1889.

ABSTRACT.

TABLES I. TO X. INCLUSIVE;

EXHIBIT A.

AND

SCHEDULES A. AND B

CONTENTS.

EXHIBIT A.—Statements concerning the inmates of the jails for the year ending June 30, 1888, the nine months ending June 30, 1887, and the years ending September 30, 1886, 1885, and 1884.

TABLE I.—Number of prisoners remaining in the jails June 30, 1887, and the number in the jails July 1, 1887; number received and the total number and the average number in the jails during the year; average duration of imprisonment; whole number and number under eighteen years of age of each sex, and the per cent of each sex to the whole number of both sexes received.

TABLE II.—Whole number of prisoners received in the jails; total number, number of each sex, and number under eighteen years of age charged with high crimes and with minor offenses, with the per cent of each sex and of the number under eighteen years of age to the total of each class; number of witnesses, debtors, and insane and idiotic prisoners; per cent of number charged with high crimes and with minor offenses, respectively, to the whole number of prisoners received in the jails.

TABLE III.—Number of prisoners sent to state prison, to state house of correction, to Detroit house of correction, to state reform school, and to state industrial home for girls, with per cent of each to whole number confined in the jails; number escaped, and number remaining in the jails at the close of the year.

TABLE IV.—Birthplaces of white, and number of black, mulatto, and Indian prisoners.

TABLE V.—Parent-nativity of native white prisoners.

TABLE VI.—Number who could not read, and number who could not write, with per cent of each to the whole number received in the jails.

TABLE VII.—Cost of maintaining the jails.

TABLE VIII.—The total cost of maintaining the jails ; the amount of traveling and other expenses incurred in arresting and taking prisoners to the jails, in taking them to penal and reformatory institutions, and certain expenditures not elsewhere shown, together with the total expense in arresting and detaining prisoners.

TABLE IX.—Number of days prisoners were confined in the jails ; cost of keeping prisoners.

TABLE X.—City and village prisoners confined in jails.

SCHEDULE A.—Statements of sheriffs relative to condition of jails, etc.

SCHEDULE B.—List of sheriffs by counties.

MICHIGAN,
DEPARTMENT OF STATE,
Lansing, June 4, 1889. }

HON. CYRUS G. LUCE, *Governor of the State of Michigan:*

SIR—As required by law, I herewith submit the Sixteenth Abstract of the Reports of the Sheriffs of this State, being for the year ending June 30, 1888.

Very respectfully,

GILBERT R. OSMUN,

Secretary of State.

TABLES.

EXHIBIT A.

*Statement concerning the inmates of the jails for the year ending June 30, 1888, for the nine months ending June 30, 1887, and for the years ending September 30, 1886, 1885, and 1884.**

	Year ending June 30, 1888.	Nine months ending June 30, 1887.	1886.	1885.	1884.
Number in the jails at the beginning of the year.....	315	308	402	328	370
Number received during the year.....	10,380	7,160	18,101	11,304	12,172
Total number in the jails within the year.....	10,695	7,468	18,503	11,630	12,542
Number of days prisoners were confined in the jails during the year.....	134,452	72,316	116,276	121,932	123,591
Average number of prisoners in the jails during the year.....	367.33	235.07	318.56	314.36	337.68
Average duration of imprisonment in days.....	12.66	13.76	10.68	10.61	10.27
Whole number of males received during the year.....	9,649	6,753	16,386	10,715	11,595
Number of males under 18 years of age....	478	317	410	376	372
Whole number of females received during the year.....	721	405	1,704	582	508
Number of females under 18 years of age....	117	54	76	66	72
Per cent of males to total number of both sexes.....	93.05	94.35	90.58	94.85	95.84
Per cent of females to total number of both sexes.....	6.95	5.65	9.42	5.15	4.16
Total number charged with high crimes..	1,664	1,171	1,650	1,771	1,708
Number of males charged with high crimes.....	1,550	1,083	1,557	1,671	1,633
Number of females charged with high crimes.....	114	88	93	100	75
Number under 18 years of age charged with high crimes.....	120	75	57	127	55
Per cent of males charged with high crimes to the total number charged with high crimes.....	93.15	92.49	94.36	94.35	95.61
Per cent of females charged with high crimes to the total number charged with high crimes.....	6.85	7.51	5.64	5.65	4.39
Per cent of the number under 18 years of age charged with high crimes to the total number charged with high crimes....	7.21	6.40	3.45	7.17	3.22
Total number charged with minor offenses.....	8,461	5,806	16,031	9,309	10,074
Number of males charged with minor offenses.....	7,898	5,521	14,469	8,889	9,661
Number of females charged with minor offenses.....	563	285	1,562	420	413
Number under 18 years of age charged with minor offenses.....	421	233	373	442	325
Per cent of males charged with minor offenses to the total number charged with minor offenses.....	93.35	95.09	90.26	95.49	95.90
Per cent of females charged with minor offenses to the total number charged with minor offenses.....	6.65	4.91	9.74	4.51	4.10
Per cent of the number under 18 years of age charged with minor offenses to the total number charged with minor offenses.....	4.98	4.01	2.33	4.75	3.25
Number of witnesses.....	45	28	39	40	17
Number of debtors.....	44	27	33	23	25

* For foot-notes see Tables.

ABSTRACT OF THE ANNUAL REPORTS OF SHERIFFS.

EXHIBIT A.—CONTINUED.

	Year ending June 30, 1886.	Nine months ending June 30, 1887.	1886.	1885.	1884.
Number of insane persons.....	180	127	245	173	147
Number of idiotic persons.....	7	3	7	2	3
Per cent of the total number charged with high crimes to the whole number com- mitted to the jails.....	16.71	16.27	12.13	17.49	16.85
Per cent of the total number charged with minor offenses to the whole number committed to the jails.....	80.60	81.23	85.36	80.87	81.22
Number sent to State Prison.....	285	170	291	264	289
Number sent to State House of Correction.....	575	352	580	949	1,101
Number sent to Detroit House of Correc- tion.....	487	178	248	258	281
Number sent to State Reform School.....	185	94	136	108	155
Number sent to State Industrial Home for Girls.....	42	18	36	32	32
Per cent of number sent to State Prison to the whole number confined in the jails.....	2.20	2.28	1.57	2.27	2.14
Per cent of number sent to State House of Correction to the whole number con- fined in the jails.....	5.38	4.71	3.13	8.16	8.78
Per cent of number sent to Detroit House of Correction to the whole number con- fined in the jails.....	4.37	2.36	1.34	2.22	2.45
Per cent of number sent to State Reform School to the whole number confined in the jails.....	1.26	1.26	.74	.93	1.24
Per cent of number sent to State Indus- trial Home for Girls to the whole num- ber confined in the jails.....	.39	.17	.19	.28	.26
Number escaped.....	25	27	33	29	47
Number remaining in the jails at the close of the year.....	323	290	290	382	335
BIRTHPLACES OF MALE PRISONERS. (Exclusive of Blacks, Mulattoes and Indians.)					
United States.....	4,167	3,115	4,632	4,206	3,825
British America.....	928	581	991	871	655
England.....	521	511	525	591	544
Ireland.....	1,585	1,155	1,694	1,467	1,627
Scotland.....	170	120	226	214	175
Germany.....	680	300	622	561	565
Holland.....	167	113	156	115	168
Norway and Sweden.....	68	55	147	37	46
France.....	58	21	95	62	29
Miscellaneous.....	60	67	165	83	51
Unknown.....	304	105	269	599	150
Black males.....	233	122	126	133	131
Mulatto males.....	48	17	63	53	39
Indian males.....	43	23	43	46	40
Birthplace and color not reported, males.	619	443	6,633	1,572	3,551
BIRTHPLACES OF FEMALE PRISONERS. (Exclusive of Blacks, Mulattoes and Indians.)					
United States.....	314	192	220	230	177
British America.....	53	40	34	33	25
England.....	11	16	12	16	33
Ireland.....	61	62	78	56	47
Scotland.....	4	4	3	4	5
Germany.....	21	17	28	34	28
Holland.....	10	16	6	.....	1
Norway and Sweden.....	1	5	2	1	2
France.....	.....	8	1	7	5
Miscellaneous.....	6	3	9	9	1
Unknown.....	15	.....	13	37	5
Black females.....	29	29	9	15	8
Mulatto females.....	11	1	9	3	3
Indian females.....	4	3	1	1	5
Birthplace and color not reported, females	181	9	1,278	133	156
Birthplace, color and sex not reported.....	10	2	11	7	73

ABSTRACT OF THE ANNUAL REPORTS OF SHERIFFS.

9

EXHIBIT A.—CONTINUED.

	Year ending June 30, 1888.	Nine months ending June 30, 1887.	1886.	1885.	1884.
PARENT-NATIVITY OF NATIVE WHITE PRISONERS, SO FAR AS REPORTED.					
Foreign-born fathers and mothers.....	1,342	860	1,577	1,175	779
Foreign-born fathers and native mothers.....	268	102	267	106	161
Foreign-born mothers and native fathers.....	200	69	167	72	111
Number who could not read.....	677	479	659	807	888
Per cent of the number who could not read to the whole number received in the jails.....	7.50	6.88	7.00	8.00	8.98
Number who could not write.....	877	579	831	1,095	1,202
Per cent of the number who could not write to the whole number received in the jails.....	9.58	8.82	8.87	10.88	12.12
Paid to sheriffs for board and keeping of prisoners.....	\$98,631 83	\$56,098 06	\$106,016 43	\$92,285 81	\$91,890 42
Paid for medical attendance.....	2,186 85	1,333 90	2,030 15	2,333 63	2,677 80
Paid for clothing.....	1,483 53	613 45	781 55	766 42	1,039 69
Paid for repairs of the jails.....	6,109 47	4,875 05	12,516 43	15,125 08	12,358 97
Paid for furniture.....	1,685 02	524 73	922 24	888 22	482 23
Paid for all other necessary supplies.....	6,900 72	5,486 72	12,808 80	4,797 25	4,982 68
Total cost of maintaining the jails.....	\$116,996 92	\$68,931 91	\$185,136 10	\$116,095 86	\$112,981 29
Traveling and other expenses incurred in arresting and taking prisoners to the jails.....	23,427 65	15,885 13	23,916 55	29,980 21	26,754 61
Expended in taking prisoners to penal and reformatory institutions.....	14,418 98	9,719 99	12,563 18	15,798 92	16,468 95
Other expenditures.....	1,536 43	1,707 50	1,997 20	2,545 99	989 90
Total expenses of arresting and detaining prisoners.....	\$156,379 98	\$96,244 53	\$178,613 08	\$164,415 98	\$157,124 75
Cost per week for board and keeping of each prisoner in the jails.....	4 98	4 96	5 08	4 98	5 01
Average cost of each prisoner confined in the jails.....	10 68	8 78	8 74	9 36	10 10
Number of prisoners confined in the jails under city and village ordinances.....	1,178	1,458	2,092	2,097	2,476
Amount received by sheriffs for boarding city and village prisoners.....	\$2,201 35	\$8,726 21	\$6,486 98	\$6,680 81	\$9,245 52

TABLE I.

Showing for the State and Counties, the number of prisoners in the jails June 30, 1887, and on July 1, 1887, the number received and the total number and average number in the jails during the year; the average duration of imprisonment, in days; the whole number, and the number under eighteen years of age, of each sex, and the per cent of each sex to the whole number of both sexes received; for the year ending June 30, 1888.

State and Counties.	Prisoners.										Per Cent of each sex to Whole No. Received of both sexes.	
	No. remaining in the jails June 30, 1887.	No. in the jails at the beginning of the year.	No. received during the year.	Total No. in the jails within the year.	Average No. in the jails during the year.	Average duration of imprisonment in days.	Male Received during year	Whole No.				
	1	2	3	4	5	6	7				11	12
State.....	280	315	10,980	10,995	5887.86	512.66	9,649				93.05	6.95
Alcona.....			84	84	1.00	15.68	80	9	4		98.24	11.76
Alger ¹	1	1	2	3	.25	80.	2				100.	
Allegan.....	9	9	78	87			70		8		95.89	4.11
Alpena ¹												
Antrim.....			6	6	.26	22.	6				100.	
Arenac ²		1	6	6	1.02	63.17	5				100.	
Baraga.....	13	13	14	26	2.32	32.65	14				100.	
Barry.....	2	2	50	51	4.40	26.89	57	9	2		95.61	3.39
Bay.....	8	8	472	480	15.15	11.55	800	27	100	12	75.18	21.82
Benzie.....			2	2	.11	19.50	2				100.	
Berrien.....	3	3	120	123	8.80	24.70	118	8	2		99.88	1.67
Branch.....	1	1	105	106	8.67	12.67	100	2	5	2	95.24	4.76
Calhoun.....	9	9	271	280	14.73	19.28	248	14	28		91.51	8.49
Cass.....	1	3	90	93	4.87	19.89	86	6	4		95.58	4.44
Charlevoix ⁴												
Cheboygan.....	2	3	40	42	3.41	22.11	35		5		87.50	12.50
Chippewa.....		5	177	182	6.04	22.11	180	1	27	1	84.75	15.25
Clare.....	4	4	85	89	3.43	14.11	77		8	1	90.59	9.41
Clinton.....	2	2	34	36	1.95	19.83	34	2			100.	
Crawford.....			24	24	.04	.58	24				100.	
Delta.....	1	1	56	57	1.44	9.23	54	1	2	1	96.43	3.57
Eaton.....	8	8	118	126	6.02	13.23	100	4	4	3	96.46	3.54
Emmet.....			7	7	.34	17.71	7				100.	
Genesee.....	1	4	281	285	4.49	3.76	256	10	23	1	91.81	8.19
Gladwin.....			1	1	.08	12.	1				100.	
Gogebic.....	4	4	50	54	7.00	48.05	49	1	1		98.	2.
G'd Traverse.....			6	6	.45	27.67	6	1			100.	
Gratiot.....	3	3	66	69	.68	4.67	63	4	4	2	93.94	6.06
Hillsdale.....	6	6	100	106	6.87	19.72	97	4	6		94.17	5.83
Houghton.....	1	1	46	47	2.77	21.55	41	8	5		89.13	10.87
Huron.....	4	4	22	26	2.23	22.65	21	1	1		95.45	4.55
Ingham.....			367	337	10.42	11.82	329	11	6	6	97.86	2.14
Ionia.....	8	8	526	534	17.42	11.94	511	17	15	2	97.15	2.85
Iosco.....	3	3	30	33	2.34	26.97	28	4	2		93.33	6.67
Iron ⁵			13	13	.88	24.69	10		3		76.92	23.08

¹ No jail. Use Marquette county jail.

² No report.

³ No jail. Use Bay county jail.

⁴ No jail nor prisoners.

⁵ No jail. Use Menominee county jail.

⁶ Sex of 10 not reported.

⁷ Exclusive of Alpena county, from which no report has been received, and of Allegan county which did not report the number of days prisoners were confined.

TABLE I.—CONTINUED.

Counties.	Prisoners.											
	No. remaining in the jails June 30, 1887.	No. in the jails at the beginning of the year.	No. received during the year.	Total No. in the jails within the year.	Average No. in the jails during the year.	Average duration of imprisonment in days.	Males Received during the year.		Females Received during the year.		Per Cent of each sex to Whole No. Received of both sexes.	
	1	2	3	4	5	6	Whole No.	No. under 18 years of age.	Whole No.	No. under 18 years of age.	Males.	Females.
Isabella.....	1	1	28	29	1.28	16.21	23	.....	5	2	82.14	17.86
Jackson.....	11	11	309	320	9.66	11.05	248	38	61	4	80.26	19.74
Kalamazoo.....	5	5	769	774	18.64	8.82	708	80	66	17	91.42	8.58
Kalkaska.....	1	1	9	10	.43	17.60	9	.....	.....	.....	100.	.....
Kent.....	35	35	851	886	15.29	6.82	798	68	53	14	93.77	6.23
Keweenaw.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lake.....	.....	6	70	76	3.17	15.29	63	.....	7	1	90.	10.
Lapeer.....	4	4	250	254	5.87	8.46	242	6	8	3	96.80	3.20
Leelanaw.....	.....	.....	1	1	.02	8.	1	.....	.....	.....	100.	.....
Lenawee.....	13	13	228	241	10.90	16.56	218	16	15	3	93.42	6.58
Livingston.....	2	2	59	61	1.42	8.49	57	4	2	.....	96.61	3.39
Luce.....	.....	.....	15	15	.49	12.	15	.....	.....	.....	100.	.....
Mackinac.....	8	8	49	52	2.38	16.73	43	.....	6	1	87.76	12.24
Macomb.....	.....	2	216	218	2.97	4.98	214	1	2	.....	99.07	.93
Manistee.....	10	10	a 376	386	4.60	4.36	343	19	26	10	92.95	7.05
Manitou.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Marquette.....	17	17	b 221	238	13.41	20.62	214	7	4	1	98.17	1.83
Mason.....	1	1	47	48	3.89	29.67	41	2	6	1	87.23	12.77
Mecosta.....	3	3	131	134	5.41	14.77	121	9	10	.....	92.37	7.63
Menominee.....	5	5	153	158	9.70	22.47	153	8	.....	.....	100.	.....
Midland.....	1	1	31	32	1.80	20.56	29	1	2	1	93.55	6.45
Missaukee.....	.....	.....	8	8	.20	9.13	8	.....	.....	.....	100.	.....
Monroe.....	.....	.....	20	20	1.21	22.20	20	.....	.....	.....	100.	.....
Montcalm.....	10	10	180	140	9.23	24.14	127	5	8	.....	97.69	2.31
Montmorency.....	.....	.....	2	2	.06	10.	2	.....	.....	.....	100.	.....
Muskegon.....	10	10	170	180	11.08	22.48	145	4	25	.....	85.29	14.71
Newaygo.....	.....	.....	48	43	2.19	18.60	37	.....	6	.....	86.06	13.95
Oakland.....	7	7	159	166	7.46	16.45	154	13	5	.....	96.86	3.14
Oceana.....	.....	.....	7	7	.25	12.86	7	2	.....	.....	100.	.....
Ogemaw.....	1	1	92	93	1.95	7.68	89	3	8	.....	96.74	3.26
Ontonagon.....	2	2	28	25	2.94	43.	23	.....	.....	.....	100.	.....
Osceola.....	2	2	3	5	.26	19.	3	.....	.....	.....	100.	.....
Oscoda.....	.....	.....	1	1	.01	4.	1	.....	.....	.....	100.	.....
Otsego.....	.....	2	1	3	.20	24.	1	1	.....	.....	100.	.....
Ottawa.....	2	2	253	255	8.65	12.42	253	2	.....	.....	100.	.....
Presque Isle.....	.....	.....	2	2	.03	5.	2	.....	.....	.....	100.	.....
Roscommon.....	.....	.....	7	7	.86	18.57	7	.....	.....	.....	100.	.....
Saginaw.....	9	9	250	259	11.37	16.07	236	6	14	4	94.40	5.60
Sanilac.....	.....	.....	11	11	.92	30.45	10	.....	1	.....	90.91	9.09
Schoolcraft.....	2	2	6	8	1.25	57.13	6	.....	.....	.....	100.	.....
Shiawassee.....	6	6	43	54	4.52	30.63	47	.....	1	1	97.92	2.08
St. Clair.....	8	13	537	550	8.46	5.63	503	33	34	11	93.67	6.33
St. Joseph.....	5	5	56	61	4.59	27.54	53	1	3	.....	94.64	5.36
Tuscola.....	1	1	37	38	1.55	14.95	36	4	1	.....	97.30	2.70
Van Buren.....	.....	.....	58	58	2.83	17.83	56	.....	2	2	96.55	3.45
Washtenaw.....	3	3	298	301	3.42	4.16	290	2	8	2	97.82	2.18
Wayne.....	23	23	1,029	1,052	34.90	12.14	951	63	78	6	92.42	7.58
Wexford.....	.....	.....	46	46	1.62	15.04	42	1	4	.....	91.30	8.70

a Sex of 7 not reported.

b Sex of 8 not reported.

ABSTRACT OF THE ANNUAL REPORTS OF SHERIFFS.

TABLE II.—CONTINUED.

Counties.	Whole number received in the jails during the year.	Number charged with high crimes.				Per cent of each sex and of the number under 18 years of age charged with high crimes to the total number charged with high crimes.				Number charged with minor offense ^a .				Per cent of each sex and of the number under 18 years of age charged with minor offenses to the total No. charged with minor offenses.				Number of witnesses.	Number of debtors.	Number of insane persons.	Number of idiotic persons.	Per cent of the total number charged with high crimes to the whole number received in the jails.	Per cent of the total number charged with minor offenses to the whole number received in the jails.
		Total number.	Males.	Females.	No. under 18 years of age.	Males.	Females.	No. under 18 years of age.	Total number.	Males.	Females.	No. under 18 years of age.											
1		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21		
Montcalm.....	130	84	81	3	.....	91.18	8.82	.....	96	96	.....	5	100.	.....	5.21	.....	.....	.....	.....	28.15	73.85
Montmorency.....	2	.....	.....	.....	.....	.....	.....	.....	2	2	.....	.....	100.	.....	.....	.....	.....	.....	.....	100.	100.
Muskegon.....	170	70	61	9	.....	87.14	12.86	.....	96	82	14	4	85.42	14.58	4.17	.....	.....	2	2	41.18	58.82
Newaygo.....	43	14	14	.....	.....	100.	.....	.....	23	23	.....	.....	100.	.....	.....	2	.....	4	.....	32.56	67.44
Oakland.....	159	44	44	.....	.....	100.	.....	.....	115	110	5	18	95.65	4.35	1.13	.....	.....	.....	.....	27.67	72.33
Oceana.....	7	2	2	1	.....	100.	.....	50.	2	2	.....	.....	100.	.....	.....	.....	1	2	.....	28.57	71.43
Ogemaw.....	93	15	15	.....	.....	100.	.....	.....	76	78	3	3	96.06	3.96	3.95	.....	.....	1	.....	16.30	83.70
Ontonagon.....	23	4	4	.....	.....	100.	.....	.....	19	19	.....	.....	100.	.....	.....	.....	.....	.....	.....	17.39	82.61
Osceola.....	3	1	1	.....	.....	100.	.....	.....	2	2	.....	.....	100.	.....	.....	.....	.....	.....	.....	33.33	66.67
Oscoda.....	1	1	1	.....	.....	100.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	100.	100.
Otsego.....	1	.....	.....	.....	.....	.....	.....	.....	1	1	.....	1	100.	.....	100.	.....	.....	.....	.....	.....	100.
Ottawa.....	253	17	17	.....	.....	100.	.....	.....	235	235	.....	2	100.	.....	.....	.....	.....	1	.....	6.72	93.28
Presque Isle.....	2	2	2	.....	.....	100.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	100.	100.
Roscommon.....	7	6	6	.....	.....	100.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	85.71	14.29
Saginaw.....	250	63	63	2	4	97.06	2.94	5.88	175	166	9	6	94.86	5.14	3.43	1	.....	6	.....	27.20	72.80
Sanilac.....	11	1	1	.....	.....	100.	.....	.....	10	9	1	.....	90.	10.	.....	.....	.....	.....	.....	9.09	90.91
Schoolcraft.....	6	2	2	.....	.....	100.	.....	.....	3	3	.....	.....	100.	.....	.....	.....	.....	1	.....	33.33	66.67
Shiawassee.....	43	6	6	.....	.....	100.	.....	.....	41	40	1	1	97.56	2.44	2.44	.....	.....	1	.....	12.50	87.50
St. Clair.....	537	31	30	1	.....	96.77	3.23	.....	493	461	32	44	98.51	6.49	8.90	5	2	6	.....	5.77	94.23
St. Joseph.....	b 56	6	3	3	50.	50.	50	50	1	100.	2.	1	
Tuscola.....	37	15	15	1	.....	100.	.....	6.07	18	17	1	3	94.44	5.56	16.67	2	.....	2	.....	40.54	59.46
Van Buren.....	53	4	4	.....	.....	100.	.....	.....	53	51	2	2	96.23	3.77	3.70	1	.....	.....	.....	6.90	93.10
Washtenaw.....	236	15	15	.....	.....	100.	.....	.....	278	270	8	2	97.12	2.88	.72	.....	.....	5	.....	5.08	94.92
Wayne.....	c 1,029	152	129	23	12	84.87	15.13	7.89	877	822	55	57	93.73	6.27	6.50	3	17	4	3	.....	.....
Wexford.....	46	16	14	2	.....	87.50	12.50	.....	29	28	1	1	96.55	3.45	3.45	.....	1	.....	.....	34.78	65.22

a Report says 1 insane soldier or marine transferred to asylum for insane. b One less than total of columns 2, 9, 16, 17, 18 and 19. c Twenty-seven less than total of columns 2, 9, 16, 17, 18 and 19.

TABLE III.

Showing, for the State and Counties, the number of prisoners convicted and sent to State Prison, State House of Correction, Detroit House of Correction, State Reform School, and State Industrial Home for Girls; the per cent of sentences to each place of confinement to the whole number confined in the jails, and the number that have made their escape during the year ending June 30, 1888; also the number remaining in the jails June 30, 1888.

State and Counties.	Convictions.										Number Escaped.	Number remaining in the Jails at close of the year.
	Number sent to State Prison.	Number sent to State House of Correction.	Number sent to Detroit House of Correction.	Number sent to State Reform School.	Number sent to state Industrial Home for Girls.	Per cent to the whole number confined in the Jails.						
						State Prison.	State House of Correction.	Detroit House of Correction.	State Reform School.			
1	2	3	4	5	6	7	8	9	10	11	12	
State	223	575	467	135	42	2.20	5.38	4.37	1.26	9	35	328
Alcona	1	1				2.94	2.94					1
Allegan	3	13				3.96	17.11				3	4
Antrim												1
Baraga											1	3
Barry	3	7	3			4.92	11.43	4.92			1	3
Bay	4	30	57	10	6	10	6.25	11.38	2.08	1.25		16
Benzie		1					50.					
Berrien	6	12				4.88	9.75					6
Branch		17	13	3	2		16.04	12.36	1.39	1.39		6
Calhoun	18	25	9	2		4.64	8.93	3.21	.71			14
Cass	5	3		2		5.43	6.70		2.17			4
Cheboygan	1	3	1			2.33	7.14	2.33			1	4
Chippewa	6	7		1	1	3.30	3.85		.55	.55	1	9
Clare	2	6	3			2.25	6.74	3.99				1
Clinton		5	1				13.99	2.73				3
Crawford	2					3.23						1
Delta	6	4		1	1	10.63	7.08		1.75	1.75	3	1
Eaton	4	3		3		3.33	2.43		2.47			6
Emmet			1					14.29				1
Genesee	2	7	29	5	2	.70	2.45	10.15	1.75	77	4	4
Gogebic	3	1				14.51	1.35				3	4
Grand Traverse	1	3				12.77	50.					
Gratiot	4	3				5.90	4.35					11
Hillsdale	5	5	3	2		4.59	4.59	2.75	1.33		1	5
Houghton	1					2.13						3
Huron	1	3				3.35	7.69					
Ingham	3	7	9	1	5	.39	2.03	2.37	.30	1.49		14
Ionia	3	15	3	4	1	.55	2.31	.55	.75	.79		3
Iosco	3	1		2		9.09	3.03		6.06			2
Iron	1	3	3			7.69	23.03	23.03				
Isabella	2	3	6		1	6.90	10.11	20.22		3.45		1
Jackson	5	30	12	3		1.66	9.33	3.75	.63			10
Kalamazoo	14	19	3	1	3	1.81	2.45	.39	.13	.39		5
Kalkaska											1	2
Kent	12	26	5	20	3	1.35	3.91	.55	2.25	11	2	19

TABLE III.—CONTINUED.

Counties.	Convictions.										Number Escaped.	Number remaining in the Jails at close of the year.
	Number sent to State Prison.	Number sent to State House of Correction.	Number sent to Detroit House of Correction.	Number sent to State Reform School.	Number sent to State Industrial Home for Girls.	Per cent to the whole number confined in Jails.						
						State Prison.	State House of Correction.	Detroit House of Correction.	State Reform School.	State Industrial Home for Girls.		
	1	2	3	4	5	6	7	8	9	10	11	12
Lake	1	7	6	.....	.....	1.32	9.21	7.89	.....	.....	.....	5
Lapeer .....	.....	88	5	1	3	.....	14.98	1.97	.89	.79	.....	2
Lenawee	4	3	7	3	1	1.66	1.24	2.90	1.24	.41	.....	2
Livingston	1	10	.....	.....	.....	1.64	16.39	.....	.....	.....	.....	.....
Luce	1	2	.....	.....	.....	6.67	13.83	.....	.....	.....	.....	.....
Mackinac	3	1	1	.....	.....	5.77	1.93	1.93	.....	.....	1	4
Macomb	2	3	5	1	.....	.93	1.38	2.29	.46	.....	.....	3
Manistee	7	23	19	3	1	1.81	5.96	4.92	.78	.26	.....	6
Marquette	5	5	6	5	.....	2.10	2.10	2.52	2.10	.....	.....	7
Mason	5	10	5	2	1	10.42	20.83	10.42	4.16	2.08	1	.....
Mecosta	2	13	1	4	.....	1.49	9.70	.75	2.99	.....	.....	10
Menominee	6	1	.....	.....	.....	3.80	.63	.....	.....	.....	.....	9
Midland	3	6	.....	1	1	9.38	18.75	.....	3.13	3.13	.....	1
Missaukee .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Monroe	2	4	.....	.....	.....	10.	20.	.....	.....	.....	.....	.....
Montcalm	7	5	2	2	.....	5.	3.57	1.43	1.43	.....	.....	6
Muskegon	3	21	9	.....	.....	1.67	11.67	5.	.....	.....	.....	10
Newaygo	4	4	.....	.....	.....	9.30	9.30	.....	.....	.....	1	1
Oakland	4	7	7	.....	.....	2.41	4.22	4.22	.....	.....	.....	8
Oceana .....	.....	2	.....	.....	.....	.....	28.57	.....	.....	.....	.....	.....
Ogemaw	2	3	5	.....	.....	2.15	3.23	5.38	.....	.....	.....	4
Ontonagon	2	.....	.....	.....	.....	8.	.....	.....	.....	.....	.....	1
Osceola	1	.....	.....	.....	.....	20.	.....	.....	.....	.....	.....	.....
Otsego .....	.....	2	.....	.....	.....	.....	66.66	.....	.....	.....	.....	.....
Ottawa .....	.....	5	.....	.....	.....	.....	1.96	.....	.....	.....	.....	6
Presque Isle .....	.....	1	1	.....	.....	.....	50.	50.	.....	.....	.....	.....
Roscommon	4	2	2	.....	.....	57.14	28.57	28.57	.....	.....	.....	1
Saginaw	6	16	23	4	3	2.32	6.14	8.88	1.54	.77	.....	7
Sanilac .....	.....	1	1	.....	.....	.....	9.09	9.09	.....	.....	.....	1
Schoolcraft .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
Shiawassee	3	2	.....	.....	1	5.56	3.70	.....	.....	1.85	.....	2
St. Clair	4	7	27	7	3	.73	1.27	4.91	1.27	.55	2	9
St. Joseph	2	8	.....	.....	.....	3.28	13.11	.....	.....	.....	.....	2
Tuscola	1	3	.....	4	.....	2.63	7.69	.....	10.53	.....	.....	1
Van Buren	2	2	1	1	2	3.45	3.45	1.72	1.72	3.45	.....	1
Washtenaw .....	.....	22	6	2	.....	.....	7.31	1.99	.66	.....	.....	5
Wayne	25	63	154	36	3	2.38	5.89	14.64	3.14	.29	1	33
Wexford	2	7	8	1	.....	4.35	15.22	1.74	2.17	.....	.....	2

TABLE IV.

Showing, for the State and Counties, by sex, the birthplaces of the prisoners received in the jails, exclusive of Blacks, Mulattoes, and Indians; the number of Blacks, Mulattoes and Indians; the number whose birthplaces and color are not reported, and the whole number of prisoners received in the jails; for the year ending June 30, 1888.

State and Counties.	Whole No. of prisoners rec'd in the jails within the year.	Birthplaces of prisoners received in the jails, exclusive of Blacks, Mulattoes and Indians.																						Blacks.		Mulattoes.		Indians.		Birthplaces and color not reported.		Birthplaces, color and sex not reported.
		Males.											Females.																			
		United States.	British America.	England.	Ireland.	Scotland.	Germany.	Holland.	Norway and Sweden.	France.	Miscellaneous.	Unknown.	United States.	British America.	England.	Ireland.	Scotland.	Germany.	Holland.	Sweden.	France.	Miscellaneous.	Unknown.	Males.	Females.	Males.	Females.	Males.	Females.			
State.....	10,380	4,167	926	521	1,585	170	680	167	468	58	9	204	314	53	11	61	4	21	10	1	1	6	15	223	29	48	11	43	4	619	181	10
Alcona.....	34	16	9	1	1	1	1	1	1	1	1	2	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Alger.....	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
Allegan.....	73	50	2	7	10	1	8	1	1	1	1	1	8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Antrim.....	6	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
Arenac.....	5	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
Baraga.....	14	1	1	1	2	1	2	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Barry.....	59	55	1	1	1	1	2	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Bay.....	472	45	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Benzie.....	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
Berrien.....	120	76	1	9	12	8	6	1	1	1	1	18	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Branch.....	105	85	1	2	7	1	4	1	1	1	1	1	6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Calhoun.....	271	195	5	12	18	1	4	1	1	1	1	1	21	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Cass.....	90	43	1	2	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	

ABSTRACT OF THE ANNUAL REPORTS OF SHERIFFS.

TABLE IV. — CONTINUED.

Counties.	Whole No. of prisoners rec'd in the jails within the year.	Males.												Females.												Blacks.		Mulattoes.		Indians.		Birthplaces and color not reported.		Birthplaces, Color and Sex not Reported.		
		United States.	British America.	England.	Ireland.	Scotland.	Germany.	Holland.	Norway and Sweden.	France.	Miscellaneous.	Unknown.	United States.	British America.	England.	Ireland.	Scotland.	Germany.	Holland.	Sweden.	France.	Miscellaneous.	Unknown.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.					
Clare	85	30	25	1	21							3	2	1	1			1																		
Clinton	34	26		5	2				1																											
Crawford	24	5		1		2	3																													
Delta	55				4							2	1		1							1														
Eaton	113	73	2	4	17	2	6					2	1		1																					
Emmet	7	1		1	2			1																												
Genesee	281	127	56	16	44	4	4					13	8		5									8	2											
Gladwin	1	1																1																		
Gogebic	50	10	4	2	24	1	2	2																												
G'd Traverse	6	5					1																													
Gratiot	66	40		18	2	2																														
Hilledale	103	42	2	11	18	2	21	1				3						1																		
Houghton	46	14	6	1	5		1		1				1		3																					
Huron	22	5	13				2	1					1																							
Ingham	337	204	44	22	34	4	10	2				4												3	3											
Ionia	526	202	44	12	198	20	21	2				12			1			1						6	1											
Iosco	30	12	10	1	3		1		2				1											1												
Iron	13	2	3		1		1																													
Isabella	26	14	4		4										1																					
Jackson	309	177			49	1	8		2			50			6		1							11	4											
Kalamazoo	769	173		62	315	6	34	46				57												62	9											
Kalkaska	9	6			1	1																														
Kent	551	523	7	48	64	6	35	53				16	2	4	12	2	3	6						39	4		2									
Lake	70	38	9	7	1		8					7																								
Lapeer	250	133	87	14	43	5	7					4	3				1																			
Leelanaw	1																																			
Lenawee	223	173		2	16	6	7	2				13					1																			
Livingston	59	21		8	24		9					1		1																						
Luce	15	2	8																																	
MacKinnac	49	23	8	8	2	1	2					3	2		1																					

ABSTRACT OF THE ANNUAL REPORTS OF SHERIFFS.

[illegible]

Report says "Males born in the United States

1. Born in Finland 4. Denmark 5. he United States 11. British America 12. 1. and Sweden 2." a total of 55, or 1 more received in the jail.

1. Mexico 1.

**Born in Denmark 1, Poland 1,
Born in Italy.**

United States 86, British America many 6, and female blacks 16," a
ber of females reported.

TABLE V.

Showing, for the State and Counties, so far as reported, the Parent-nativity of White Prisoners born in the United States who were received in the Jails during the year ending June 30, 1888.

State and Counties.	White Prisoners Born in the United States.			
	Total Number.	Nativity of Parents.		
		Both Foreign-born.	Foreign-born Fathers and Native Mothers.	Foreign-born Mothers and Native Fathers.
State.....	a 3,187	1,842	266	200
Alcona.....	19	10	b	b
Alger.....	2	2		
Barry.....	57	5		
Bay.....	193	76	16	7
Benzie.....	2	b	b	b
Berrien.....	78	31	8	5
Calhoun.....	216	100	5	8
Cass.....	43	1		b
Crawford.....	6	3	2	
Emmet.....	1	b	b	b
Genesee.....	140	73	18	8
Gladwin.....	1	b	b	b
Gratiot.....	43	27		
Houghton.....	14	8	1	
Huron.....	5	2	b	b
Ingham.....	208	170	2	3
Ionia.....	214	193	8	2
Iosco.....	13	4	1	1
Iron.....	4	3	1	
Jackson.....	227	20	b	b
Kalamazoo.....	235	102	36	40
Kalkaska.....	6	2		
Lake.....	45	2	1	b
Lenawee.....	186	115	5	4
Mackinac.....	25	24	1	b
Manistee.....	131	26	17	23
Marquette.....	84	44	5	b
Mason.....	32	1	b	b
Menominee.....	88	40	b	b
Montcalm.....	56	41	7	5
Muskegon.....	61	27	5	1
Oakland.....	99	29	6	7
Ogemaw.....	41	17	21	2
Ontonagon.....	5	1	b	b
Osceola.....	3	3	b	b
Schoolcraft.....	3	1	b	b
Tuscola.....	21	21		
Van Buren.....	47	10		
Washtenaw.....	96	40	20	22
Wayne.....	359	59	73	63
Wexford.....	29	6	2	

a Exclusive of all counties that did not report parent-nativity of white prisoners born in the United States.
b None.

TABLE VI.

Showing, for the State and Counties, the number of Prisoners received in the Jails who could not Read, and the number who could not Write, and the per cent of each class, to the whole number received in the Jails, for the year ending June 30, 1888.

State and Counties.	Could not Read.		Could not Write.	
	Number.	Per Cent to the whole number received in the Jails.	Number.	Per Cent to the whole number received in the Jails.
State.....	677	a 7.56	877	b 9.58
Alcona.....	1	2.94	1	2.94
Alger.....	c	-----	c	-----
Allegan.....	5	6.85	5	6.85
Arenac.....	c	-----	c	-----
Baraga.....	4	28.57	4	28.57
Barry.....	3	5.08	3	5.08
Bay.....	78	15.47	81	17.16
Benzie.....	c	-----	c	-----
Berrien.....	8	6.67	8	6.67
Branch.....	7	6.67	15	14.29
Calhoun.....	15	5.54	20	7.38
Cass.....	3	3.33	3	3.33
Cheboygan.....	1	2.50	6	15.
Chippewa.....	42	23.73	42	23.73
Clare.....	10	11.76	11	12.94
Clinton.....	c	-----	c	-----
Crawford.....	3	12.50	3	12.50
Delta.....	9	16.07	9	16.07
Eaton.....	7	6.19	7	6.19
Emmet.....	c	-----	c	-----
Genesee.....	3	2.85	10	3.56
Gladwin.....	c	-----	c	-----
Gogebio.....	3	6.	4	8.
Grand Traverse.....	c	-----	c	-----
Gratiot.....	-----	-----	10	15.15
Hillsdale.....	5	4.85	5	4.85
Houghton.....	16	34.78	17	36.96
Huron.....	4	18.18	4	18.18
Ingham.....	27	8.01	28	8.31
Ionia.....	5	.96	7	1.33
Iosco.....	5	16.67	10	33.33
Isabella.....	2	7.14	2	7.14
Jackson.....	12	3.88	14	4.53
Kalamazoo.....	26	8.33	31	4.03
Kalkaska.....	1	11.11	1	11.11
Kent.....	31	3.64	58	6.82
Lake.....	13	18.57	13	18.57
Lapeer.....	5	2.	16	6.40
Leelanaw.....	c	-----	c	-----
Lenawee.....	2	.88	3	3.50
Livingston.....	c	-----	c	-----
Luce.....	3	20.	3	20.
Mackinac.....	10	20.41	10	20.41
Macomb.....	40	18.52	23	43.59
Manistee.....	43	11.17	43	11.17

a Exclusive of all counties that made no report of the number who could not read.
b Exclusive of all counties that made no report of the number who could not write.
c None.

TABLE VI.—CONTINUED.

Counties.	Could not Read.		Could not Write.	
	Number.	Per Cent to the whole number received in the Jails.	Number.	Per Cent to the whole number received in the Jails.
Marquette	58	20.24	66	20.86
Mason	4	8.51	4	8.51
Menominee	a	-----	a	-----
Midland	1	3.23	1	3.23
Missaukee	a	-----	a	-----
Monroe	6	80.	6	80.
Montcalm	27	20.77	27	20.77
Montmorency	a	-----	a	-----
Muskegon	8	4.71	10	5.88
Newaygo	1	2.83	1	2.83
Oakland	13	8.18	14	8.81
Oceana	2	28.57	2	28.57
Ogemaw	5	5.43	5	5.43
Ontonagon	4	17.39	5	21.74
Osceola	a	-----	a	-----
Otsego	a	-----	a	-----
Ottawa	a	-----	a	-----
Presque Isle	a	-----	a	-----
Roscommon	a	-----	5	71.43
Saginaw	20	8.	30	12.
Sanilac	a	-----	a	-----
Schoolcraft	1	16.67	1	16.67
Shiawassee	8	16.67	8	16.67
St. Joseph	5	8.93	5	8.93
Tuscola	8	21.62	8	21.62
Van Buren	a	-----	3	5.17
Washtenaw	5	1.68	5	1.68
Wayne	40	3.88	57	5.54
Wexford	10	21.74	11	23.91

a None.

TABLE VII.

Showing, for the State and Counties, the total cost of maintaining the jails, the amount paid by the counties to the sheriffs for board and keeping of prisoners, the amount paid for medical attendance, for clothing, for repairs of the jails, for furniture, and the miscellaneous jail expenditures, for year ending June 30, 1888.

State and Counties.	Expenditures.						
	Total cost of maintaining the jails.	Paid to sheriffs for board and keeping of prisoners.	For medical attendance.	For clothing.	For repairs of jails.	For furniture.	Miscellaneous.
State.....	\$116,996 92	\$98,681 88	\$2,186 85	\$1,483 53	\$5,109 47	\$1,685 03	\$6,900 72
Alcona.....	\$263 25	\$250 00	\$2 00	\$9 25	.....	\$2 00	.....
Alger.....	104 73	76 45	28 28	.....	.....	.....	.....
Allegan.....	700 00	700 00	.....	.....	.....	.....	.....
Antrim.....	429 10	226 20	.....	2 90	\$200 00	.....	.....
Arenac.....	186 80	186 80	.....	.....	.....	.....	.....
Baraga.....	813 75	708 75	25 00	65 00	15 00	.....	.....
Barry.....	1,160 08	924 85	27 00	24 00	89 40	4 00	\$140 83
Bay.....	^b 5,587 50	8,637 50	150 00	.....	.....	.....	1,800 00
Benzie.....	78 50	68 50	.....	.....	.....	10 00	.....
Berrien.....	1,337 40	1,337 40	.....	.....	.....	.....	.....
Branch.....	1,143 50	935 00	25 00	20 00	115 00	83 50	15 00
Calhoun.....	3,011 40	^c 2,789 90	22 50	15 00	109 00	9 00	75 00
Cass.....	1,298 50	1,098 50	5 00	60 00	50 00	60 00	25 00
Cheboygan.....	936 49	675 00	9 50	4 50	172 99	.....	74 50
Chippewa.....	3,221 67	1,391 67	80 00	50 00	1,500 00	200 00	50 00
Clare.....	1,485 46	1,115 46	50 00	25 00	175 00	20 00	100 00
Clinton.....	1,589 52	1,384 94	1 65	23 20	86 75	.....	142 98
Crawford.....	359 00	350 00	4 00	.....	8 00	2 00	.....
Delta.....	590 20	425 20	8 75	11 70	87 80	.....	106 75
Eaton.....	1,673 50	1,253 50	^d 25 00	^d 20 00	^d 200 00	25 00	^d 150 00
Emmet.....	180 00	180 00	.....	.....	.....	.....	.....
Genesee.....	1,974 00	1,089 00	50 00	10 00	25 00	.....	800 00
Gladwin.....	42 00	12 00	.....	.....	80 00	.....	.....
Gogebic.....	3,910 15	3,619 25	80 00	46 50	10 00	180 40	24 00
Grand Traverse.....	279 00	200 00	.....	.....	50 00	29 00	.....
Gratiot.....	770 10	549 10	14 00	28 00	25 00	4 00	150 00
Hillsdale.....	1,302 62	1,211 62	50 00	8 00	20 00	6 00	12 00
Houghton.....	^e 6,000 00	^e 6,000 00	.....	.....	.....	.....	.....
Huron.....	1,340 12	753 86	39 25	95	.....	.....	546 56
Ingham.....	2,474 00	2,400 00	25 00	5 00	13 00	6 00	25 00
Ionia.....	2,959 15	2,915 65	10 00	8 50	.....	.....	25 00
Iosco.....	924 25	840 75	6 30	.....	.....	.....	77 20
Isabella.....	336 00	300 00	4 00	2 00	12 00	13 00	5 00
Jackson.....	^f 45 00	.....	20 00	.....	25 00	.....	.....
Kalamazoo.....	4,217 90	3,277 80	100 00	26 00	758 98	40 12	15 00

^a The county of Alpena made no report; Iron made no report of cost of maintaining the jail Jackson reports only cost of medical attendance and repairs, and Sanilac only the cost of clothing and repairs.

^b Sheriff says: "I find it entirely out of my ability to learn the expense of running the jail."

^c "If allowed as last year."

^d Estimated.

^e Amount paid sheriff on contract and covers all expenses.

^f Includes only cost of medical attendance and repairs.

TABLE VII.—CONTINUED.

Counties.	Expenditures.						
	Total cost of maintaining the jails.	Paid to sheriffs for board and keeping of prisoners.	For medical attendance.	For clothing.	For repairs of jails.	For furniture.	Miscellaneous.
Kalkaska.....	\$810 00	\$400 00	.....	.....	\$200 00	.....	\$10 00
Kent.....	4,925 50	4,570 00	\$125 00	\$56 00	150 00	88 90	15 00
Keweenaw.....	14 59	.....	.....	.....	.....	14 59	.....
Lake.....	797 84	687 84	41 00	5 00	35 00	8 50	25 50
Lapeer.....	1,894 50	1,525 00	65 00	9 50	.....	20 00	275 00
Leelanaw.....	87 62	8 70	.....	.....	6 50	15 05	7 37
Lenawee.....	2,222 00	2,189 00	33 00	.....	.....	.....	.....
Livingston.....	1,415 00	1,100 00	50 00	5 00	60 00	100 00	100 00
Luce.....	309 00	155 00	10 00	.....	.....	69 00	75 00
Mackinac.....	726 10	581 10	20 00	25 00	.....	.....	100 00
Macomb.....	783 50	518 50	33 00	.....	122 00	.....	110 00
Manistee.....	1,393 00	1,325 00	18 00	25 00	25 00	.....	.....
Marquette.....	4,911 69	3,654 21	356 12	76 81	529 76	67 12	228 17
Mason.....	1,579 00	1,468 00	30 00	6 00	75 00	.....	.....
Mecosta.....	1,888 79	1,581 88	120 00	.....	125 00	20 00	81 91
Menominee.....	3,458 00	2,428 00	150 00	300 00	100 00	480 00	.....
Midland.....	1,430 00	1,200 00	5 00	.....	200 00	25 00	.....
Missaukee.....	62 10	62 10	.....	.....	.....	.....	.....
Monroe.....	517 53	308 48	.....	2 00	.....	.....	212 64
Montcalm.....	3,500 00	3,500 00	.....	.....	.....	.....	.....
Montmorency.....	41 00	36 50	4 50	.....	.....	.....	.....
Muskegon.....	2,142 90	2,187 50	b	5 40	.....	.....	.....
Newaygo.....	756 97	600 92	b	16 05	140 00	.....	.....
Oakland.....	2,615 52	1,681 80	39 00	13 70	841 52	82 89	506 61
Oceana.....	620 78	550 78	.....	.....	40 00	.....	30 00
Ogemaw.....	501 30	439 90	.....	12 75	8 00	1 60	38 75
Ontonagon.....	920 05	719 25	45 50	.....	.....	.....	155 30
Osceola.....	198 00	150 00	15 00	7 50	10 50	5 00	10 00
Oscoda.....	3 10	3 80	.....	.....	.....	.....	.....
Otsego.....	64 00	62 00	.....	.....	1 00	1 00	.....
Ottawa.....	1,928 42	1,883 42	16 00	8 00	.....	.....	21 00
Presque Isle.....	13 00	8 00	.....	.....	.....	5 00	.....
Roscommon.....	138 00	120 00	.....	.....	8 00	.....	.....
Saginaw.....	2,789 90	2,671 40	75 00	18 50	25 00	.....	.....
Sanilac.....	c 6 50	.....	.....	4 00	2 50	.....	.....
Schoolcraft.....	526 16	287 91	17 00	.....	.....	.....	221 25
Shiawassee.....	1,548 85	1,444 85	50 00	12 00	.....	12 00	30 00
St. Clair.....	1,581 00	1,581 00	.....	.....	.....	.....	.....
St. Joseph.....	1,149 00	1,117 00	10 00	15 00	.....	5 00	2 00
Tuscola.....	1,418 50	1,150 00	8 00	30 50	25 00	.....	200 00
Van Buren.....	581 00	517 00	27 00	7 00	.....	.....	30 00
Washtenaw.....	2,065 00	2,000 00	45 00	10 00	.....	.....	10 00
Wayne.....	9,219 13	8,447 04	16 50	350 47	249 77	153 35	.....
Wexford.....	978 05	923 70	.....	2 35	6 00	.....	46 00

a Physicians paid by the year.

b Furnished by county physician.

c Includes only cost of clothing and repairs.

TABLE VIII.

Showing, for the State and Counties, the total amount expended in arresting and detaining prisoners, the total cost of maintaining the jails, the amount of traveling and other expenses incurred in arresting and taking prisoners to the jails, and to the penal and reformatory institutions, and certain expenditures not elsewhere shown, for the year ending June 30, 1888.

State and Counties.	Totals.	Total cost of maintaining the jails.	Traveling and other expenses incurred in arresting and taking prisoners to the jails.	Expended in taking prisoners to penal and reformatory institutions.	Expenditures not elsewhere shown.
State	a \$156,379 98	\$116,996 92	\$23,427 65	\$14,418 98	\$1,536 43
Alcona	\$343 25	\$263 25	\$45 00	\$35 00	.....
Alger	223 41	104 73	10 00	108 68	.....
Allegan	700 00	710 00	.....	.....	.....
Antrim	570 80	429 10	33 70	.....	\$108 00
Arenac	420 80	186 80	200 00	44 00	.....
Baraga	909 75	813 75	25 00	.....	71 00
Barry	2,707 23	1,160 08	1,338 81	208 40	.....
Bay	7,209 50	5,587 50	.....	1,622 00	.....
Benzie	85 50	78 50	7 00	.....	.....
Berrien	1,337 40	1,337 40	.....	.....	.....
Branch	2,533 15	1,143 50	500 00	688 65	200 00
Calhoun	5,438 40	3,011 40	1,500 00	777 00	150 00
Cass	1,940 59	1,233 50	235 40	214 11	217 88
Cheboygan	1,292 31	936 49	177 32	178 50	.....
Chippewa	4,471 67	3,221 67	600 00	650 00	.....
Clare	1,756 46	1,485 46	110 00	186 00	25 00
Clinton	1,952 99	1,589 52	270 37	83 10	60 00
Crawford	621 00	359 00	200 00	62 00	.....
Delta	647 20	580 20	57 00	b	.....
Eaton	1,768 55	1,673 50	b	95 03	.....
Emmet	215 00	180 00	b	85 00	.....
Genesee	3,684 00	1,974 00	1,100 00	610 00	.....
Gladwin	42 00	42 00	b	.....	.....
Gogebic	4,460 45	3,910 15	130 00	450 30	.....
Grand Traverse	279 00	279 00	.....	.....	.....
Gratiot	1,153 10	770 10	300 00	83 00	.....
Hillsdale	2,143 87	1,302 62	655 50	185 74	.....
Houghton	c 6,000 00	c 6,000 00	.....	.....	.....
Huron	1,568 42	1,340 12	150 00	78 30	.....
Ingham	8,999 00	2,474 00	d 1,200 00	d 200 00	e 125 00
Ionia	3,459 15	2,959 15	450 00	b	50 00
Iosco	1,141 15	924 25	110 00	99 15	7 75
Iron	574 00	.....	138 50	435 50	.....
Isabella	1,031 20	336 00	300 00	155 20	240 00
Jackson	f 45 00	f 45 00	.....	.....	.....
Kalamazoo	6,408 49	4,217 90	1,618 34	572 25	.....
Kalkaska	710 00	610 00	100 00	.....	.....
Kent	7,913 55	4,925 50	2,172 30	815 75	.....
Keweenaw	14 59	14 59	.....	.....	.....
Lake	2,352 24	797 84	1,330 00	224 40	.....
Lapeer	2,674 50	1,894 50	430 00	300 00	.....
Leelanaw	41 12	37 62	3 50	.....	.....
Lenawee	2,462 00	2,222 00	200 00	40 00	.....
Livingston	1,750 00	1,415 00	150 00	60 00	125 00

a The county of Alpena made no report, Iron made no report of cost of maintaining the jail. Jackson reports only medical attendance and repairs, and Sanilac reports only expenditures for clothing and repairs.

b Sheriff cannot report.

c Amount paid sheriff under contract and covers all expenses.

d Estimated.

e Paid for defending jail against mob.

f Paid for medical attendance and repairs.

TABLE VIII.—CONTINUED.

Counties.	Totals.	Total cost of maintaining the jails.	Travelling and other expenses incurred in arresting and taking prison- ers to the jails.	Expended in taking prison- ers to penal and reforma- tory institu- tions.	Expendi- tures not elsewhere shown.
Luce.....	\$585 00	\$809 00	\$78 00	\$198 00	
Mackinac.....	728 10	728 10			
Macomb.....	783 30	783 50			
Manistee.....	1,898 00	1,998 00			
Marquette.....	6,265 75	4,911 89	725 77	628 29	
Mason.....	2,409 00	1,579 00	550 00	280 00	
Mecona.....	2,700 09	1,888 79	675 00	186 80	
Menominee.....	4,358 00	3,458 00	450 00	450 00	
Midland.....	1,480 00	1,480 00			
Missaukee.....	62 10	62 10			
Monroe.....	643 92	517 52	100 00	26 40	
Montcalm.....	3,500 00	3,500 00	a	a	
Montmorency.....	184 00	41 00	96 00	47 00	
Muskegon.....	2,485 65	2,142 90	a	292 75	
Newaygo.....	756 97	756 97			
Oakland.....	3,685 06	2,615 52	941 99	127 55	
Oceana.....	685 78	620 78	25 00	40 00	
Ogemaw.....	986 85	501 00	281 05	172 50	\$22 30
Ontonagon.....	1,520 05	920 05	350 00	250 00	
Osceola.....	883 00	198 00	85 00	50 00	
Oscoda.....	7 80	8 80	3 50		
Otsego.....	95 50	64 00		31 50	
Ottawa.....	2,402 67	1,928 42	425 00	49 25	
Presque Isle.....	67 00	12 00	6 00	48 00	
Roscommon.....	253 00	188 90	45 00	70 00	
Saginaw.....	3,593 20	2,789 90	100 00	703 30	
Sanilac.....	59 25	b 6 50		52 75	
Schoolcraft.....	683 66	528 16	157 50		
Shiawassee.....	1,721 85	1,548 86	100 00	72 50	
St. Clair.....	2,782 00	1,581 00	756 00	445 00	
St. Joseph.....	1,674 00	1,149 00	200 00	200 00	125 00
Tuscola.....	1,588 50	1,418 50		170 00	
Van Buren.....	664 00	581 00	a	88 00	
Washtenaw.....	2,190 00	2,065 00	25 00	100 00	
Wayne.....	9,219 13	9,219 13	a		
Wexford.....	2,839 75	978 06	1,423 90	487 80	

a Sheriff cannot report.

b Expenditure for clothing and repairs only.

TABLE IX.

Showing, for the State and Counties, the whole number of days prisoners were confined in the jails, the amount paid Sheriffs for board and keeping of prisoners, and the cost per week for board and keeping of each prisoner; also the whole number of prisoners, the total cost of maintaining the jails, and the average cost of each prisoner confined in the jails; for the year ending June 30, 1888.

State and Counties.	Whole No. of days prisoners were confined in the jails.	Amount paid sheriffs for board and keep- ing of prisoners.	Cost per week for board and keeping of each prisoner.	Whole No. of prisoners confined in the jails.	Total cost of maintaining the jails.	Average cost of each prisoner confined in the jails.
State.....	a 184,452	\$98,681 33	b \$4 98	10,695	\$116,996 92	c \$10 63
Alcona.....	533	\$256 00	\$3 28	84	\$263 25	\$7 74
Alger.....	90	76 45	5 95	3	104 73	84 91
Allegan.....	d	700 00	-----	76	700 00	9 21
Alpena ¹	-----	-----	-----	-----	-----	-----
Antrim.....	182	228 20	12 00	6	429 10	71 52
Arenac.....	373	186 80	3 51	6	186 80	31 13
Baraga.....	849	708 75	5 84	28	813 75	31 22
Barry.....	1,610	924 85	4 02	61	1,160 08	19 01
Bay.....	5,546	3,637 50	4 59	480	5,587 50	11 64
Benzle.....	89	68 50	12 29	2	78 50	89 25
Berrien.....	3,038	1,337 40	3 08	123	1,337 40	10 87
Branch.....	1,343	986 00	4 87	106	1,143 50	10 79
Calhoun.....	5,392	2,789 90	3 62	260	3,011 40	10 76
Cass.....	1,784	1,093 50	4 29	92	1,298 50	14 06
Charlevoix.....	-----	-----	-----	-----	-----	-----
Cheboygan.....	1,249	675 00	3 78	42	936 49	22 30
Chippewa.....	2,209	1,391 67	4 41	182	3,221 67	17 70
Clare.....	1,256	1,115 46	6 22	89	1,485 46	16 69
Clinton.....	714	1,384 94	13 53	36	1,589 52	44 15
Crawford.....	14	350 00	175 00	24	350 00	14 96
Delta.....	527	425 20	5 65	57	590 20	10 35
Eaton.....	2,206	1,253 50	3 98	121	1,673 50	13 83
Emmet.....	124	180 00	10 16	7	180 00	25 71
Genesee.....	1,642	1,089 00	4 64	235	1,974 00	6 98
Gladwin.....	12	12 00	7 00	1	42 00	42 00
Gogebic.....	2,595	3,619 25	9 76	54	3,910 15	72 41
Grand Traverse.....	166	200 00	8 43	6	279 00	46 50
Gratiot.....	822	549 10	11 94	69	770 10	11 16
Hillsdale.....	2,149	1,211 62	3 95	109	1,302 62	11 95
Houghton.....	1,013	e 6,000 00	41 46	47	e 6,000 00	-----
Huron.....	854	753 36	6 18	26	1,340 12	51 54
Ingham.....	3,815	2,400 00	4 40	337	2,474 00	7 34

¹ No report.

a Exclusive of Alpena that made no report, and of Allegan that did not report number of days prisoners were confined in the jail.

b Exclusive of Alpena that made no report; of Houghton which contracts all sheriff's business; of Allegan that does not report the number of days prisoners were confined; and of Iron, Jackson, and Sanilac that do not report amount paid sheriffs for board and keeping of prisoners.

c Exclusive of Alpena that made no report; of Houghton which contracts all sheriff's business; of Iron which does not report expenditures; of Jackson which reports only medical attendance and repairs; of Keweenaw which reports no prisoners, and of Sanilac which reports only expenditures for clothing and repairs.

d Number of days not reported.

e Amount paid Sheriff on contract and covers all expenses.

ABSTRACT OF THE ANNUAL REPORTS OF SHERIFFS.

TABLE IX.—CONTINUED.

Counties.	Whole No. of days prisoners were confined in the jails.	Amount paid sheriffs for board and keep- ing of prisoners.	Cost per week for board and keeping of each prisoner.	Whole No. of prisoners confined in the jails.	Total cost of maintaining the jails.	Average cost of each prisoner confined in the jails.
Ionia.....	6,375	\$2,915 65	\$3 20	534	\$2,959 15	\$5 54
Iosco.....	867	840 75	6 87	33	924 25	28 01
Iron.....	831	a	-----	13	a	-----
Isabella.....	470	800 00	4 47	29	836 00	11 59
Jackson.....	3,536	a	-----	330	b 45 00	-----
Kalamazoo.....	6,623	3,377 80	3 36	774	4,217 90	5 45
Kalkaska.....	156	400 00	1 79	10	610 00	61 00
Kent.....	5,597	4,570 00	5 72	898	4,925 50	5 56
Keweenaw.....	-----	-----	-----	c	14 59	-----
Lake.....	1,162	687 84	4 14	76	797 84	10 50
Lapeer.....	2,149	1,525 00	4 97	254	1,894 50	7 46
Leelanaw.....	8	8 70	7 61	1	87 62	37 62
Lenawee.....	3,991	2,189 00	3 84	241	2,223 00	9 22
Livingston.....	518	1,100 00	14 86	61	1,415 00	23 20
Luce.....	180	155 00	5 17	15	809 00	20 60
Mackinac.....	870	581 10	4 67	53	726 10	13 96
Macomb.....	1,086	518 50	3 34	218	783 50	3 59
Manistee.....	1,684	1,323 00	5 51	396	1,393 00	3 61
Manitou.....	-----	-----	-----	d	-----	-----
Marquette.....	4,908	3,654 21	5 21	238	4,911 69	20 64
Mason.....	1,424	1,468 00	7 22	48	1,579 00	32 90
Mecosta.....	1,979	1,531 88	5 42	124	1,888 79	14 09
Menominee.....	3,550	2,428 00	4 79	158	3,458 00	21 89
Midland.....	658	1,200 00	12 77	32	1,430 00	44 68
Missaukee.....	73	62 10	5 95	8	62 10	7 76
Monroe.....	444	803 48	4 78	20	517 52	25 88
Montcalm.....	3,380	3,500 00	7 25	140	3,500 00	25 00
Montmorency.....	20	36 50	12 78	2	41 00	20 50
Muskegon.....	4,047	2,187 50	3 70	180	2,142 90	11 91
Newaygo.....	800	600 92	5 28	43	756 97	17 60
Oakland.....	2,730	1,681 80	4 31	166	2,615 52	15 76
Oceana.....	90	550 78	42 84	7	620 78	88 68
Ogemaw.....	714	489 90	4 31	93	501 00	5 39
Ontonagon.....	1,075	719 25	4 68	25	920 05	36 80
Osceola.....	95	150 00	11 05	5	198 00	39 60
Oscoda.....	4	3 80	6 65	1	3 80	3 80
Otsego.....	72	62 00	6 08	3	64 00	21 33
Ottawa.....	3,166	1,883 42	4 16	255	1,928 42	7 56
Presque Isle.....	10	8 00	5 60	2	13 00	6 50
Roscommon.....	130	130 00	7 00	7	138 00	19 71
Saginaw.....	4,161	2,671 40	4 49	259	2,789 90	10 77
Sanilac.....	335	a	-----	11	d 6 50	a
Schoolcraft.....	457	287 91	4 41	8	526 16	65 77
Shiawassee.....	1,654	1,444 85	6 11	54	1,548 85	28 68
St. Clair.....	3,097	1,581 00	3 57	550	1,581 00	2 87
St. Joseph.....	1,630	1,117 00	4 65	61	1,149 00	18 84
Tuscola.....	568	1,150 00	14 17	38	1,413 50	37 20
Van Buren.....	1,034	517 00	3 50	58	581 00	10 02
Washtenaw.....	1,253	2,000 00	11 17	301	2,065 00	68 60
Wayne.....	12,775	8,447 04	4 63	1,053	9,219 13	8 76
Wexford.....	692	923 70	9 34	46	978 05	21 26

a Expenditures not reported.

b Includes only expense for medical attendance and for repairs.

c No prisoners.

d Expenditures for clothing and for repairs only.

TABLE X.

Showing, for the State and Counties, the number of prisoners confined in the jails under city and village ordinances, and the amount received by the Sheriffs for boarding and keeping such prisoners, as reported for the year ending June 30, 1888.

State and Counties.	Number of prisoners.	Amount received by sheriffs for boarding prisoners.
State.....	1,178	\$2,201 35
Alcona.....	3	\$2 00
Allegan.....	24	.....
Baraga.....	5	.....
Barry.....	71	168 35
Benzie.....	6	58 00
Berrien.....	6	.....
Branch.....	6	50 00
Cass.....	7	.....
Clare.....	35	48 10
Emmet.....	10	25 00
Genesee.....	49	85 00
Houghton.....	29	.....
Ingham.....	1	8 50
Ionia.....	1	7 70
Iosco.....	28	56 40
Isabella.....	51	200 00
Jackson.....	110	.....
Kalamazoo.....	55	174 00
Livingston.....	43	64 00
Luce.....	5	24 00
Mackinac.....	16	105 16
Macomb.....	65	.....
Manistee.....	16	38 00
Marquette.....	2	28 66
Menominee.....	30	45 00
Midland.....	10	28 00
Newaygo.....	10	30 00
Oceana.....	8	47 50
Ontonagon.....	7	15 00
Osceola.....	a	10 00
Ottawa.....	20	60 00
Presque Isle.....	10	4 50
Saginaw.....	258	554 98
Schoolcraft.....	68	186 50
St. Clair.....	50	84 00
St. Joseph.....	2	.....
Tuscola.....	56	.....

a Number not reported.

SCHEDULE A.

Statements of the Condition of the Jails in the several Counties, with miscellaneous remarks relating to them and their inmates, as made by the Sheriffs.

Alcona.—Jail is 30 x 38 feet, built of brick, heated by stove and ventilated by windows. No sewerage. There are four cells: one is 16 x 12½, one 12½ x 9 feet, 5 inches, one is 12½ x 7½ and one 7 x 10 feet. The cells are made of hemlock plank and boiler iron. Have special provisions for female and boy prisoners, but none for insane and idiotic persons.

Alger.—We have no jail nor lock-up in this county. Prisoners are confined in Marquette county jail.

Allegan.—Jail is 25½ x 36½ feet, built of brick, heated by wood stoves and ventilated by three windows. Sewerage is in good condition. There are four cells 8 x 12 feet, made of three-inch oak plank and iron bars 1½ inches by ⅜ of an inch. Have special provision for female and boy prisoners.

Antrim.—Jail is 30 x 40 feet, built of 2 x 6 plank spiked flat together. It is heated by two box stoves, and ventilated by opening windows. There is no sewerage. There are eight cells 5 x 7 feet made of solid boiler iron. Have no provision for females or boys, nor for insane and idiotic persons.

Arenac.—We have no jail. Prisoners are confined in Bay county jail.

Baraga.—Jail is 20 x 22 feet, built of brick and heated by wood stove. It is ventilated by windows and ventilators in ceiling. Sewerage is in good condition. There are two cells 6 x 8 feet made of steel. For female and boy prisoners there is one room in sheriff's dwelling. No provision for insane and idiotic persons.

Our jail is only one story, but should be two, then there could be arrangements made for insane and idiotic persons, also for debtors and witnesses. The best would not be much.

Barry.—Jail is 30 x 68 feet, built of brick, iron and wood, heated by furnace and ventilated by windows. Sewerage is in poor condition. There are eight cells: one is 7 x 8, one 6 x 7, one 5 x 9, one 8 x 12, two 9 x 9½ and two are 6 x 9 feet. They are made of wood and have iron doors. There is one cell which can be used in warm weather for female and boy prisoners. No special provision for insane and idiotic persons.

Bay.—Jail, 40 x 40 feet, is built of brick and stone, heated by steam furnace and ventilated by shafts and the windows. Sewerage is in good condition. There are twenty-four cells, 5 x 8 feet, made of iron. Female and boy prisoners are kept in a room in part of the building separate from the jail proper. No special provision for insane and idiotic persons.

Benzie.—Jail is 14 x 16 feet, made of wood and iron, heated by stove and ventilated by windows and ventilator. Sewerage is in bad condition. There are two cells about 8 x 10 feet each, made of wood. Have no special provision for female and boy prisoners and none for insane and idiotic persons.

Berrien.—Jail is 44 x 44 feet, built of brick, stone and iron, heated by wood stoves and ventilated at top of jail. No sewerage—use vaults. There are sixteen cells on the first floor and eight on the second floor. They are

4 x 6 feet, made of stone and iron. For female and boy prisoners there are provisions made on second floor. No provisions for insane and idiotic persons.

Branch.—Jail is 30 x 32 feet, built of iron, brick and stone, and heated by furnace. The ventilation is by means of flues from brick stacks. The condition of sewerage is fair—no water-works—cess-pool in rear. There are eight cells, 4 x 8 feet, made of boiler iron. For female and boy prisoners there are two cells, 10 x 12 feet, in second story. No provision for insane and idiotic persons. Have no bath-room. Water is supplied in tank above by pump in jail.

Calhoun.—The resident portion of the jail is 30 x 32½ feet. Jail is built of brick and iron, with stone foundation. The main jail is 32 x 33 feet, has two wings, 18½ x 21½ feet. It is heated by steam and ventilated by iron pipes from the top of the jail, also in the walls. Sewerage is in good condition. There are twelve cells. They are 6 x 10 and 9 x 12 feet, made of iron and steel. Special provisions for female and boy prisoners, also for insane and idiotic persons.

Cass.—Jail is 32 x 40 feet, built of stone, iron and brick, heated by steam and ventilated by flues. Sewerage in good condition. There are fourteen cells, 8 x 8 feet, made of stone and iron. No provision for insane and idiotic persons.

Charlevoix.—There is no county jail in our county.

Cheboygan.—Jail is 26 x 28 feet, built of brick, heated by stoves and ventilated by ventilator in roof. Sewerage is in good condition. There are eight cells, 5 x 7 feet, six made of iron and two of wood. For female prisoners there are two wooden cells in the upper story of sheriff's residence. No provision for boy prisoners, and none for insane and idiotic persons.

The iron bars with which the jail was formerly supplied have been taken out and steel bars put in their place.

Chippewa.—Jail is 30 x 34 feet, built of stone, heated by steam and only ventilated by opening the windows. Sewerage is in good condition. There are six cells, 6½ x 4 feet, made of iron and cement. For female and boy prisoners there are rooms up-stairs. No provision for insane and idiotic persons.

Clare.—The main building is 34 x 36 feet, and the wing is 22 x 32 feet, built of brick, heated by wood furnace and ventilated by slide windows. Condition of sewerage, good; have closets in corridors. There are ten cells, 6 x 8 feet, and they are in the wing. Those in the main building, which are for female and boy prisoners, are the same size. Cells are made of boiler iron. Have no special provision for insane and idiotic persons.

Clinton.—Jail, 40 x 45 feet, is built of brick and iron, heated by furnace and ventilated by windows. Sewerage is in bad condition. There are fourteen cells, 5 x 7 feet, made of wood and iron. For female and boy prisoners there is a small room in the upper story of the sheriff's residence. No provision for insane and idiotic persons.

Crawford.—Jail is 12 x 14 feet, built of iron, heated by wood stove, ventilated by window and has no sewerage. There are three cells, 4 x 8 feet, made of iron. Have no special provision for female and boy prisoners and none for insane and idiotic persons.

Delta.—Jail is 20 x 24 feet, built of brick, heated by stove and has no ventilation except by opening windows. Sewerage is in good condition. There are three cells, 8 x 9 feet, made of steel and iron. There is one cell, 8 x 9 feet, for females, but none for boys or insane and idiotic persons.

Eaton.—Jail 25 x 27 feet inside, built of brick, stone and iron, heated by steam and ventilated by windows and perforated cells. Sewerage is in good condition. There are six cells: one city lock-up in main building and two for females, which is above in the sheriff's residence. Two of the cells are 5 x 7, and four are 7 x 7 feet. They are made of plated steel and iron. Have no special provision for insane and idiotic persons.

Emmet.—Jail is built of wood, heated by stoves and ventilated by grates and windows. Sewerage good—needs none. There are two cells, 6 x 10 and 10 x 10 feet, made of wood with grated doors. For female and boy prisoners and for insane and idiotic persons there are upper rooms, adjoining living rooms of keeper of jail.

Genesee.—Jail is 30 x 32 feet, built of brick and iron, heated by stoves and ventilated by windows. Sewerage is in good condition. There are fifteen cells, 5 x 7 feet, made of iron. For female and boy prisoners there are two rooms separate from the jail proper. No provision for insane and idiotic persons.

Gladwin.—Jail is 16 x 40 feet, built of brick, heated by wood stoves, and ventilated by windows. No sewerage. There are three cells, 6 x 10 feet, made of sheet-iron. No special provision for female and boy prisoners, nor for insane and idiotic persons.

Gogebio.—Jail is 30 x 40 feet, with 12-foot posts. It is built of pine lumber, heated by wood stove and ventilated by raising windows. Sewerage is in bad condition. There are four cells 6 x 7 feet, made of boiler iron. For female and boy prisoners there is a separate cell made of lumber. No special provision for insane and idiotic persons. There is a new jail now being built at a cost of \$16,000. It will be completed about June 1, 1889.

Grand Traverse.—Jail is 24 x 24 feet, built of stone, iron and brick, and heated by steam. Sewerage is in good condition. There are eighteen cells, 5 feet 8 inches x 7 feet 9 inches, made of iron. There are separate apartments for the women, and special provisions for insane and idiotic persons.

Gratiot.—Jail is 31½ x 32½ feet, built of brick, stone, wood and iron, heated by furnace and ventilated by windows. Sewerage is in good condition. There are eight cells 5 x 7 feet, built of iron. For female and boy prisoners there is an extra room with two cells. This is used for the insane and idiotic also.

Hillsdale.—Jail is 30 x 40 feet, built of brick and stone, heated by steam and ventilated by pipes. Sewerage is in good condition. There are fourteen cells 8 x 8 feet, made of stone and iron. There are two cells for female prisoners and the second story is used for boys. No special provision for insane and idiotic persons.

Houghton.—Jail is 30 x 50 feet, two stories and 15-foot ceiling. It has brick and stone walls and cement floors. It is heated by steam and ventilated by windows and a system of ventilation in walls. Sewerage is in excellent condition. There are thirteen double cells 6½ x 7 feet, made of iron and steel. Have special provision for females and boys and for insane persons. The jail is new and is very well ventilated, is lighted by electric light and has improved patterns of cells and locking.

The county contracts with the sheriff for all expenses of maintaining the jail and prisoners, locks and unlocks, arresting prisoners and taking those sentenced to State prison, and house of correction and attending court, and pays the sheriff \$6,000 per year.

Huron.—Jail is 30 x 32 feet, built of brick, heated by steam and ventilated by raising the windows. Sewerage is in good condition. There are thirteen cells 5 x 7 feet made of iron. For female prisoners there is a cell over sheriff's residence. None for boys nor for insane and idiotic persons. The jail is good but it requires ventilation.

Ingham.—The jail is 19 x 26 feet, two stories high, built of brick and iron, heated by stoves and ventilated by six-inch pipe passing through the wall and connecting with large pipe on roof. The sewerage is in very bad condition. There are eight single cells and one double one below, made of boiler iron, and three single cells above made of plank. The cells are 4½ x 7 feet. For female and boy prisoners there is a large room and three cells in the upper story. Have no special provision for insane and idiotic persons.

The jail is much too small for the number of prisoners sent here. It is badly constructed, poorly ventilated and has no convenience for keeping it clean.

Ionia.—Jail is 31½ x 34½ feet, built of brick, stone and iron, heated by steam and ventilated by ventilators in ceiling and by windows. Sewerage is in good condition. There are thirteen cells, 5 x 7 feet, made of heavy boiler iron. For female and boy prisoners there is one cell included with those mentioned previously, and is not connected with the jail proper. Have no special provision for insane and idiotic persons. The jail is strong, but is not arranged so the sheriff can comply with the statute in regard to the separation of prisoners of different grades of crime.

Iosco.—Jail is 22 x 22 feet and two stories high. It is built of brick, has stone foundation, is heated with a hot-air furnace and ventilated by ventilators in chimneys through the roof. Sewerage is in good condition. There are four cells which will hold four persons in each. They are 6½ x 8 x 7 feet. Two are made of steel and two of iron. For female and boy prisoners there are two cells in second story. No provision for insane and idiotic persons except what is mentioned above.

Since making my last report our county has built a new jail and sheriff's residence combined, with stone foundation and brick walls. The jail portion is 22 feet square and two stories high. In the lower story are two steel cells 6½ x 8 x 7 feet, with corridor five feet wide by thirteen feet long. In the upper story are two cells of the same size, but without corridor, made of heavy plate iron. Both upper and lower cells are furnished with privies, and the lower cells have a wash sink in the corridor, with water tank in the upper story that supplies both stories with water. The cells were made and put in by the Pauly Jail Manufacturing Co., of St. Louis, Mo. The whole building is heated by a furnace in the cellar, under the residence part of the building. The jail has a sewer extending some distance away and discharges into a large covered tank. Both jail and residence are well and thoroughly ventilated. Total cost about \$6,000.

Iron.—We have no jail—use Menominee county jail.

Isabella.—Jail 30 x 30 feet, is built of brick, stone and cement. At present it is heated with stoves. It is designed to heat with hot air, but arrangements are not yet completed. The ventilation is by a tube running up and out of the cells to chimney. Sewerage consists of an eight-inch stone pipe running from jail to Chippewa river. There are six cells, 8 x 10 feet, made of case-hardened steel. There is an upper room, full size of jail, which is to

be partitioned off for boys and women, but it is not yet completed. No special provision for insane and idiotic persons.

Jackson.—Jail is 40 x 60 feet, built of brick, heated by stoves, and has no ventilation except by windows and doors. Condition of sewerage is bad enough. There are fourteen cells, 5 x 7 feet, made of sheet iron. Have no special provision for insane and idiotic persons.

Kulamazoo.—Jail is built of iron, stone and brick, heated by steam and ventilated by windows and pipes. Sewerage is in good condition. There are thirty-four cells 5 x 7 feet, made of iron, stone and brick. For female and boy prisoners there are six cells in the third story. No provision for insane and idiotic persons.

Kalkaska.—Jail is 24 x 32 feet, built of wood and iron. It is heated by wood stoves, and ventilated by windows only. There is no sewerage. There are five cells. There are two iron cells about 6 x 8 feet, and two wooden cells; one is 6 x 12 feet, and one 6 x 8 feet. Have no special provisions for female and boy prisoners, nor for insane and idiotic persons. Our jail is unhealthy, and in my judgment is unfit for the long confinement of prisoners. It has little or no ventilation, and the privy vault is in the main hall adjacent to the cells.

Kent.—Jail is 34 x 50 feet, built of brick, iron and stone, heated by steam and ventilated by flues running through walls opening into corridors. Sewerage is in good condition. There are forty-one cells 5 x 7 feet, made of stone and iron. There are two cells for females and seven for boys apart from the main building, and there is one cell for insane and idiotic persons. This jail is used for confining United States prisoners for the Western district of Michigan.

Keweenaw.—Jail is 20 feet square and has two floors. It is built of stone, is heated by stoves and ventilated by windows and ventilators in chimney. Sewerage is in good condition. There are two cells 7 x 6 x 7 feet, made of iron. For female and boy prisoners there are separate rooms on second floor. Have no special provision for insane and idiotic persons. The jail is in good condition. Since making my last report water has been brought into the jail by pipes, and now a stream of water can be running through the jail all the time. The first story contains the two cells. In the second story there are two rooms each 10 x 20 feet. All the rooms have ventilators in chimneys. The sheriff's residence is attached to the jail, and is constructed of wood.

Lake.—Jail is 20 x 50 feet, built of brick, heated by stoves, and ventilated by flue through chimney. Sewerage is not in good condition. There are six cells 4 x 8 feet, made of iron and brick. Have special provision for female and boy prisoners, but none for insane and idiotic persons.

Lapeer.—Jail is 28 x 32 and 16 x 16 feet, built of brick and wood, heated by stoves and ventilated by windows. Sewerage is in good condition. There are six cells 6½ x 8 feet, made of wood. For female and boy prisoners there are two cells in upper story. No special provision for insane and idiotic persons.

Leelanaw.—Jail is 16 x 24 feet, built of wood, heated by stove and ventilated by windows. No sewerage. There are three cells: two are 7 x 11 and one is 5 x 12 feet. Cells are made of wood. Have special provision for female prisoners, but none for insane and idiotic persons.

Lenawee.—Jail is 37½ x 24 feet, built of stone, iron and brick, heated by steam, and ventilated by raising and lowering windows. Condition of sewerage is fair. There are twelve cells 5 x 7 feet, made of stone and iron.

There is one room for female prisoners and one for boys, but none for insane and idiotic persons.

Livingston.—Jail is 30 x 32 feet, built of brick, stone and iron, and heated by hot water. Ventilation is by means of hot air flue running from cells to roof. Sewerage is in good condition. There are ten cells, six are 6 x 8, three 6 x 10, and one 10 x 14 feet, and a bath-room 6 by 10 feet. Cells are made of boiler iron and plank, and lathed and plastered. Have good accommodations for female and boy prisoners, also for insane and idiotic persons.

Our jail was built last summer at a cost of about \$1,100. There is a good residence for sheriff's family and everything in good shape.

Luce —Jail, 26 x 36 feet, is made of brick, iron and wood, heated by coal stoves and ventilated by ventilators in chimney and by windows. Sewerage is in first class condition. There are three cells, 7 x 9 feet, and a large corridor, all in good shape. Cells are made of iron and steel. Have no special provision for female and boy prisoners and none for insane and idiotic persons. There is plenty of room however and more cells will be added in the near future. Connected with the jail and under the same roof are the living rooms for the jailer's family and such help as he needs to assist in the care of prisoners. The size of this building or addition is 26 x 30 feet. There is also in the jail lot a good well. The location is high and is in a pleasant part of the village of Newberry, the county seat.

Mackinac.—The jail is underground. It is built of stone, iron and brick, heated by stoves and ventilated by windows. There is no sewer, slop-pails are used. There are four cells, 6 x 8 feet, made of stone and iron. There are separate rooms for female and boy prisoners, but the women's room is not very healthy. In the spring the snow-water comes through the walls. Have separate rooms for insane and idiotic persons.

The jail was protested against by the county jail inspector, first because of its being underground, and second because there are no water closets, and third because it is not safe.

Macomb.—Jail is three stories, 28 x 35 feet, built of brick, heated by stoves and ventilated by a shaft. Sewerage is in fair condition. There are six cells, 6 x 10 feet, made of iron. There are rooms in the second story that are used for females and boys. No special provision for insane and idiotic persons.

Manistee.—Jail, 26 x 42 feet, built of stone, brick and iron, is heated by steam and ventilated by air shafts. Sewerage is in very good condition. There are thirteen cells; ten are 5 x 8, one is 10 x 26 with six bunks, one 10 x 12, and one 10 x 10 feet, all made of iron. Have special provision for female and boy prisoners and special provision also for girls under age. No special provision for insane and idiotic persons.

Manitou.—Jail is 16 x 20 feet and 16 feet high. It is built of 2 x 8 hemlock plank spiked together flatwise, is heated by stove and ventilated by two windows. There is a water closet in good condition. There are three cells 5 x 8 feet, made of hemlock plank spiked together flatwise. No special provision for female and boy prisoners and none for insane and idiotic persons. There are two beds, bed clothing, and a hair mattress.

Marquette.—Jail is 28 x 28 feet, two stories high, built of stone, heated by steam and ventilated by windows and ventilators. Sewerage is in good condition. There are twelve Cells. In the lower story there are six cells 5 x

7 feet, made of stone, and in the upper story there are six, which are 6 x 9 feet, made of iron. Have special provision for female and boy prisoners and for insane and idiotic persons.

Mason.—Jail is 40 x 60 feet, two stories high, built of brick and iron, heated by furnace. Ventilation and sewerage good. There are twelve cells, 5 x 8 feet, made of iron. Have special provision for female and boy prisoners and for insane and idiotic persons.

Mecosta.—Jail is 20 x 24 feet, built of wood and lined with iron. It is heated by wood stoves, and ventilated by doors and windows. Sewerage is in good condition. There are four cells, 4½ x 8 feet, made of wood lined with iron, with two bunks in each cell. There are separate rooms for female and boy prisoners, but no special provision for insane and idiotic persons.

Menominee.—Jail is 31 x 33 feet, two stories, built of brick, stone, iron and glass, is heated by steam and is well ventilated. Sewerage is in good condition. There are twenty-four iron and 4 sheet-iron cells. They are 4 x 7 feet. Have good accommodation for female and boy prisoners but none for insane and idiotic persons. Our jail is new and in good condition.

Midland.—Jail is 42 x 60 feet, built of brick and heated by hot water. Ventilation is by windows. Sewerage is in fair condition. There are fourteen cells, 5 x 8 and 8 x 12 feet, made of iron and wood. Have no special provision for female and boy prisoners and none for insane and idiotic persons.

Missaukee.—Jail 40 feet square, built of brick and iron, is heated by furnace and ventilated by ventilators in the wall. Sewerage is in fair condition. There are four cells in the main jail, 4½ x 6½ feet, made of iron. For female and boy prisoners and for insane and idiotic persons there are two cells in the sheriff's residence.

Monroe.—The jail is very old and unsafe. The board of supervisors by resolution refused to make further repairs a year ago last March, but have made no move toward building a new one. The sewerage is in good condition. There are nine cells which are 5 x 10 feet, made of wood. No provision for female and boy prisoners and none for insane and idiotic persons.

Montcalm.—Jail is 30 x 50 feet, built of stone and brick, and lined with iron. It is heated by steam and ventilated by a shaft and windows. Sewerage is in good condition. There are nine cells, 5 x 7 feet, made of iron. There are separate cells for female and boy prisoners, but there are none for insane and idiotic persons.

Montmorency.—Jail 16 x 20 feet, built of wood with stone foundation, is heated by stove and ventilated by windows. Sewerage is in good condition. There are two cells, 6 x 8 feet, made of iron. Have no special provision for female and boy prisoners and none for insane and idiotic persons.

Muskegon.—Jail is in basement with sheriff's residence included. It is 80 feet square, built of brick and heated by furnace. It is ventilated by 6 inch pipe. Sewerage is in good condition, new sewer made this year. There are twenty cells, 5 x 7 feet, made of stone. No special provision for boys and none for insane and idiotic persons.

Newaygo.—Our jail has 1,450 square feet of floor, is built of iron and wood, heated by wood and coal stoves, and ventilated by windows and doors. Sewerage is in good condition. There are four cells each having 40½ square feet of floor. They are made of wood and iron. For female and boy prisoners there are rooms lathed and plastered, well ventilated and well heated

and provided with good bed, etc. For insane and idiotic persons there are wooden cells with closets.

Oakland.—Jail 32 x 70 feet, two stories high is built of brick, stone and iron, heated by steam and ventilated by cold air taken from outside and passed through an indirect radiator then out of the jail by ventilating flues in the smoke stack. Sewerage is in very bad condition. The jail proper has twelve cells, $5\frac{1}{2}$ x $7\frac{1}{2}$ feet, made of iron. For female prisoners there is one room $11\frac{1}{2}$ x $12\frac{3}{4}$ feet with bath-room and a water closet 4 x 8 feet. The juvenile department consists of two rooms, 8 feet 5 inches by $5\frac{1}{2}$ feet each, and one hospital room, $6\frac{1}{2}$ x 12 feet, all of which is separate from the jail proper. For insane and idiotic persons there is no provision except to use the juvenile or the female department above mentioned.

Oceana.—Our jail is built of plank and iron, heated by stove and ventilated by windows. Sewerage is in poor condition. There are six cells made of wood and iron. Have no special provision for female and boy prisoners and none for insane and idiotic persons.

Ogemaw.—We are building a fire-proof brick jail with ten steel cells, sheriff's residence, etc. It is not yet completed.

Ontonagon.—Jail is 30 x 50 feet, $1\frac{1}{2}$ stories high. It is built of wood, heated by stoves and ventilated by windows. Sewerage is in fair condition. There are five cells; three are 10 x 12, and two are 8 x 10 feet. They are made of wood with iron bars across doors and windows. Have no special provision for female and boy prisoners and none for insane and idiotic persons.

Osceola.—Jail is 18 x 24 feet, built of iron and wood, heated by stoves, and ventilated by air-pipes and windows. Condition of sewerage is fair. There are six cells, 4 x 8 feet, lined with iron. Have special provision for female and boy prisoners, but none for insane and idiotic persons.

Oscoda.—Jail 16 x 20 feet, built of wood, is heated by wood stove and has no special ventilation. No sewerage. There are two cells, 8 x 5 x 7 feet, made of iron. Have no special provision for female and boy prisoners and none for insane and idiotic persons. It is a poor, miserable temporary building.

Otsego.—Jail is 18 x 30 feet, built of wood, heated by box stove and ventilated by grated windows. No sewerage, only privy vault fourteen feet deep. There are three cells, 6 x 7 feet, made of boiler iron. There are no special provisions for female and boy prisoners and none for insane and idiotic persons.

Ottawa.—Jail is 30 x 36 feet, built of brick and two-inch plank and lined with boiler iron. It is heated by a furnace, ventilated by three ventilators in ceiling, one in floor, and also by windows. Sewerage is in good condition. There are nine cells; four are 8 x 7, two are 5 x 8, two are 8 x 12 and one is 8 x 20 feet, made of boiler iron, sheeting and flooring. There are two cells, 8 x 12 feet, expressly for female and boy prisoners. For the insane and idiotic we use the department last named above.

Presque Isle.—Jail 22 x 36 feet inside, is built of stone and iron, warmed by wood stove, and ventilated by windows. Sewerage is in good condition. There are six cells; five are 6 x 10 and one is 10 x 12 feet, made of stone and iron. Have separate rooms for boys and females, and separate room for insane and idiotic persons.

Roscommon.—Jail, 30 x 40 feet, built of wood, is heated by stoves and

ventilated by windows. Sewerage is in good condition. There are three cells, 6 x 8 feet, made of wood and iron. Have special provision for female and boy prisoners, but none for insane and idiotic persons.

Saginaw.—The main building of the jail is 30 x 50 feet, and the addition, 26 x 36 feet. It is all two stories. It is built of brick, heated by steam and ventilated by flues. Sewerage is in good condition. There are thirty-two cells: the single are 5 x 7 ft. x 8 feet high; the double ones are 7 x 7 ft. x 8 feet high. They are made of bar and boiler iron. For female and boy prisoners there are separate cells in the addition. No special provision for insane and idiotic persons.

Sanilac.—Jail is 36 x 40 feet, built of brick, heated by stoves and ventilated by ventilator in roof. Sewerage is in bad condition. There are three cells 6 x 8 feet made of iron and steel. Have no special provision for female and boy prisoners, and none for insane and idiotic persons.

Schoolcraft.—Jail is 18 x 24 feet, two stories high, built of wood heated by stove in corridor and ventilated by windows in corridor. There are no water closets and no sewerage—use buckets; same in condition as last year. There are six cells or iron cages, 6 x 6 feet. For female and boy prisoners there are five small rooms up-stairs, with barred windows; these are used for the insane and idiotic as well.

Shiawassee.—Jail is 30 x 32 feet, built of brick, stone and iron, heated by stoves and ventilated by pipes. Sewerage is in good condition. There are six cells 6 x 8 feet, made of iron. For female and boy prisoners there are lathed and plastered rooms on second floor over cells. Have no special provision for insane and idiotic persons.

St. Clair.—Jail is 32 feet square, built of stone, brick and iron, heated by stoves and ventilated by windows with iron grates. Sewerage is in good condition. There are six cells 6 x 7½ feet, made of iron. For female and boy prisoners there are four large cells on second floor, with bath-room and closets, also provision for insane and idiotic persons.

St. Joseph.—Jail is 40 x 50 feet, built of brick, warmed with wood and coal and ventilated by windows and doors. Sewerage is in good condition. There are fifteen cells, four are 8 x 10 and eleven are 4 x 10 feet, and lined with boiler iron. For female and boy prisoners there is one large room not separate from the other portion of the jail except by a door, and that punched full of holes to give ventilation. No provision for insane and idiotic persons. The separation for females and boys is what I call no separation—very inconvenient to keep either from hard sinners.

Tuscola.—Jail is 34 feet square, built of brick, stone and iron, heated by stoves, and ventilated by windows. Sewerage is in bad condition. There are seven cells: six are 5 x 8 feet, made of iron, and one 8 x 8 feet, made of wood, this being used for female and boy prisoners. No special provision for insane and idiotic persons. The jail is furnished with fuel by supervisors.

Van Buren.—Jail is 30 x 40 feet, built of wood, heated by stoves and ventilated by windows. Sewerage is in good condition. There are eleven cells: nine are 7 x 10 x 8, and two are 7 x 9 feet. They are all made of wood except one, which is iron-lined. Have three cells for female and boy prisoners. No provision for insane and idiotic persons.

Washtenaw.—Jail 20 x 30 feet, is built of brick, heated by steam and ventilated by open windows and large air-pipes. Sewerage is in very good condition. There are eighteen cells 4 x 7 feet, made of steel and hardened iron.

The second story of the jail is reserved for boys and females. For insane and idiotic persons there are two cells on second floor.

Wayne.—Jail 43 x 92 feet. The wards are 10 x 81 feet, with three floors, two wards on each floor. It is built of stone, heated by steam, and has a ventilator in each cell. Sewerage is in good condition. There are seventy-eight cells 5 x 7 feet, made of brick. For female and boy prisoners there is one ward for each. No special provision for insane and idiotic persons.

Wexford.—Jail 30 x 30 feet, built of stone, brick iron and steel, is heated by a furnace and ventilated by register in large chimney, also by windows. There is no sewerage—a good cesspool 30 feet deep 40 feet from building. There are six cells 5 x 7 feet. Two of these are steel cages, and the other four are made of brick, steel and iron. There are two cells up-stairs in sheriff's residence, for female and boy prisoners. No special provision for insane and idiotic persons.

SCHEDULE B.

Names of Sheriffs as Signed Officially to their Reports.

Counties.	Names of Sheriffs.	County Seats.
Alcona.....	Charles Sterritt.....	Harrisville.
Alger.....	John McKinnon.....	Au Train.
Allegan.....	William T. Finch.....	Allegan.
Alpena.....	.....	.....
Antrim.....	L. C. Handy.....	Bellaire.
Arenac.....	Newton B. Weaver.....	Omer.
Baraga.....	A. G. Shields.....	L'Anse.
Barry.....	Baker Shriner.....	Hastings.
Bay.....	B. Conklin.....	Bay City.
Benzie.....	A. B. Case.....	Benzonia.
Berrien.....	Benton R. Sterns.....	Berrien Springs.
Branch.....	Alanson T. Kinney.....	Coldwater.
Calhoun.....	John C. Barker.....	Marshall.
Cass.....	Jacob McIntosh.....	Cassopolis.
Charlevoix.....	Willis B. Hurd (under sheriff).....	Boyer City.
Cheboygan.....	George Paquette.....	Cheboygan.
Chippewa.....	Donald M. MacKenzie.....	Sault Ste. Marie.
Clare.....	T. H. Lavery.....	Harrison.
Clinton.....	Robert M. Swigart.....	St. Johns.
Crawford.....	Wm. McCullough.....	Grayling.
Delta.....	Columbus J. Provo.....	Escanaba.
Eaton.....	Judiah P. Perkins.....	Charlotte.
Emmet.....	F. J. Smith.....	Harbor Springs.
Genesee.....	Arthur C. McCall.....	Flint.
Gladwin.....	Michael Greeley (under sheriff).....	Gladwin.
Gogebic.....	David F. Foley.....	Bessemer.
Grand Traverse.....	B. J. Morgan.....	Traverse City.
Gratiot.....	Perry D. Pittit.....	Ithaca.
Hillsdale.....	Myron G. Wood.....	Hillsdale.
Houghton.....	William J. Ryan.....	Houghton.
Huron.....	Martin Conaton.....	Bad Axe.
Ingham.....	Harry O. Call.....	Mason.
Ionia.....	Hiram N. Lee.....	Ionia.
Iosco.....	John W. Lanktree.....	Tawas City.
Iron.....	John S. McLean.....	Crystal Falls.
Isabella.....	J. E. Fessenden.....	Mt. Pleasant.
Jackson.....	Francis G. Fifield.....	Jackson.
Kalamazoo.....	William F. Montague.....	Kalamazoo.
Kalkaska.....	Myron A. Morrell.....	Kalkaska.
Kent.....	Loomis K. Bishop.....	Grand Rapids.

